

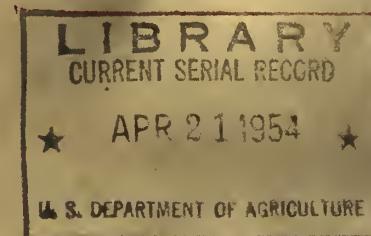
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Federal - State Cooperative  
Snow Surveys and Water Supply Forecasts  
for  
**OREGON**



Soil Conservation Service  
United States Department of Agriculture  
AND  
Oregon Agricultural Experiment Station

Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U.S. Forest Service, National Park Service and other Federal, State and local organizations.

AS OF  
APR. 1, 1954

**TO RECIPIENTS OF COOPERATIVE SNOW SURVEY  
AND WATER SUPPLY FORECAST REPORTS:**

Forecasts by U. S. Weather Bureau of total annual streamflow October-September, inclusive, at more than 300 gaging stations are issued monthly January through May in the publication **WATER SUPPLY FORECASTS FOR THE WESTERN UNITED STATES**.

Weather Bureau forecasts of runoff presented in that bulletin are computed from procedures based on mathematical analysis of the relation between precipitation and runoff.

The Weather Bureau bulletins may be secured by writing to:

Hydrologist in Charge  
River Forecast Center  
U. S. Weather Bureau.  
712 Federal Office Building  
Kansas City 6, Missouri

For current information on local river and flood conditions, reference should be made to the appropriate River District Office listed below:

Meteorologist in Charge.....Columbia River and  
Weather Bureau Office tributaries below Grand  
320 Custom House Coulee Dam, except the  
Portland 9, Oregon Snake River and tribu-  
tarries.

Meteorologist in Charge.....Oregon and California  
Weather Bureau Airport Station Coast drainage, from and  
Box 1072 including Umpqua River  
Medford, Ore. Basin, southward to and  
including Klamath River  
and tributaries; the  
Great Basin in Oregon

State of Oregon

FEDERAL-STATE COOPERATIVE  
SNOW SURVEYS AND WATER FORECASTS  
FOR  
OREGON

Report Prepared  
by  
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Issued

April 9, 1954

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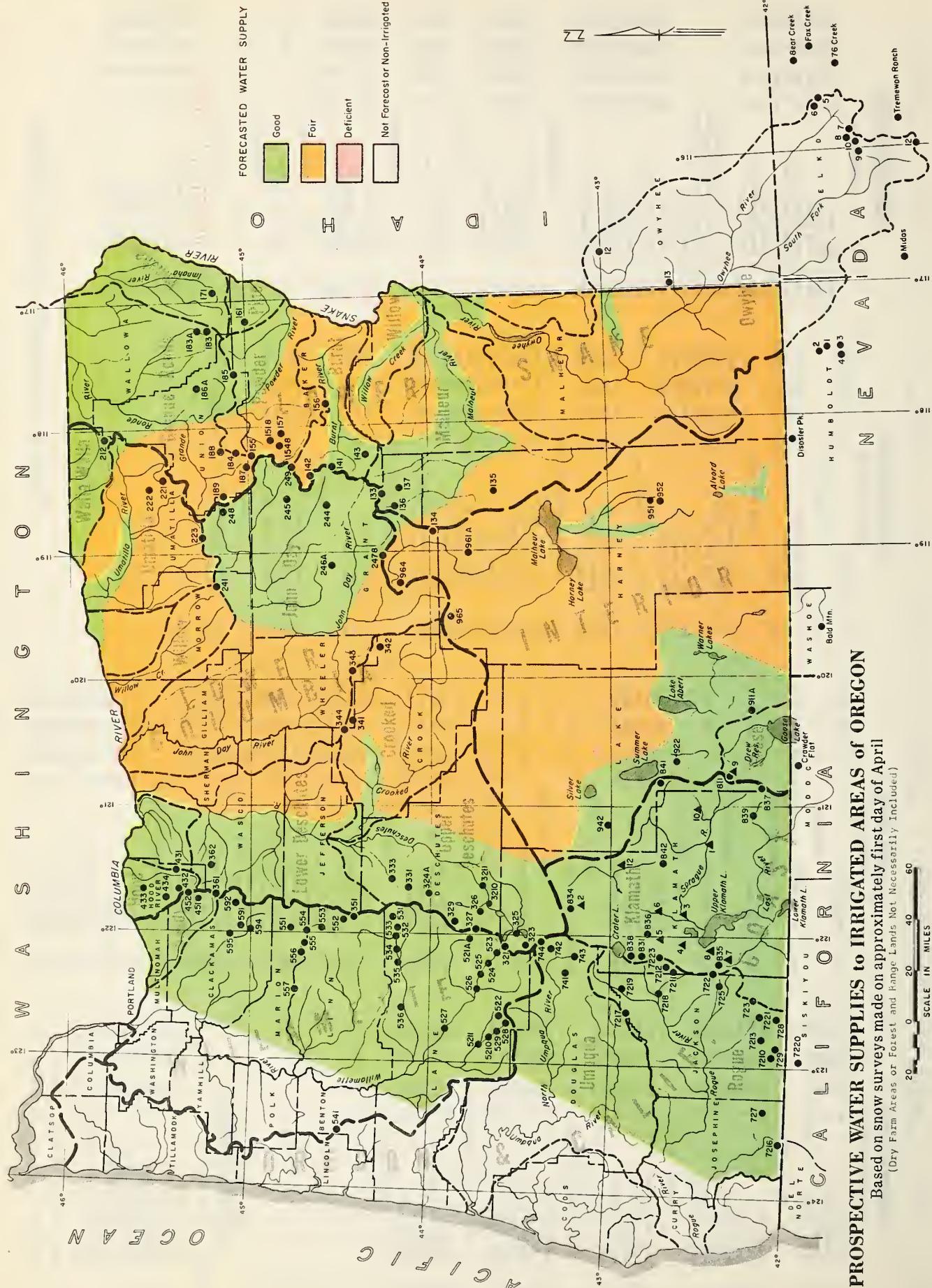


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## INDEX to OREGON SNOW COURSES



FINAL WATER SUPPLY OUTLOOK

1.

FOR OREGON

April 1, 1954

Outlook for Oregon's 1954 water supplies is "fair" to "excellent".

SNOW-COVER: Water content of mountain snow-cover averages 102 percent normal on 106 long record snow courses and is 89 percent of last year. Snow surveys above 5000 feet average 98 percent normal. Below 5000 feet, snow-cover is 113 percent normal. Snow-cover increased 4 percent since last month. By major watersheds, snow-cover as percent of normal varies from a high of 144 percent in the Chewaucan River watershed to a low of 59 percent in the Owyhee River watershed.

SOIL-MOISTURE: Soils on mountain watersheds are well wetted under present snow-cover except for the extreme eastern portion of the state where fall precipitation was short.

RESERVOIRED WATER: Total water stored in 25 reporting reservoirs is 16 percent greater than the 10-year average (1942-51) and equal to last year. Nine reservoirs are full, fourteen 75 percent full or better and twenty-four 50 percent full or better. Only three reservoirs (Owyhee-94%, Agency Valley-81% and Crescent Lake-89%) contain less than 100 percent of their 10-year average.

PRECIPITATION: State-wide precipitation<sup>1</sup>, September through March, averages 101 percent of the 10-year average (1942-51). Precipitation during this period varies from a high of 119 percent in Southwestern Oregon to a low of 73 percent in Southeastern Oregon.

STREAMFLOW: Outlook for April-September streamflow varies from "fair" to "excellent" assuming normal precipitation and temperature conditions during the runoff season.

Final forecasts (see page 2, 3, 4, 5) indicate near average streamflow (1942-51) can be expected throughout Oregon except in the far eastern portion of the state, where below average streamflow is forecast. Well above average streamflow is forecast for the Klamath and Coos Lake basins; Silver Lake, Summer Lake and Abert Lake basins in Lake County; the upper Deschutes basin; and in the Illinois and Applegate Rivers of the Rogue basin.

Water supplies for irrigation will be adequate in Western Oregon and in all areas where storage water is available. Some Eastern Oregon lands in the Crooked, lower John Day, Umatilla, main Grande Ronde, Powder, Burnt, Malheur and Owyhee watersheds will have late season shortages unless adequate May-June rains are received.

Stream discharge<sup>2</sup> during March was mostly below normal as follows: Hood 115%, Walla Walla 86%, Grande Ronde 57%, Owyhee 60%, John Day 69%, Deschutes 118%, Upper Klamath Lake 172%, Umpqua 73% and Willamette 77%.

<sup>1</sup>From preliminary data furnished by U. S. Weather Bureau, Portland, Oregon.

<sup>2</sup>From preliminary data furnished by U. S. Geological Survey, Portland, Oregon and State Engineer, Salem, Oregon.



## FINAL OREGON STREAMFLOW FORECASTS - APRIL 1, 1954

The following summarized runoff forecasts are based on mountain snow cover and on the assumption that precipitation and temperature during the runoff season will be approximately normal. Appreciable deviations from normal of temperature and/or precipitation, especially during April, May or June, will correspondingly modify these forecasts.

BASIN AND STREAM	Seasonal Streamflow in Thousand A. F.					
	Forecast	1954	%	Measured Runoff*	10-Yr.	
	Apr-	Apr-	10-Yr.		Avg.	
	Sept.	July	Avg.	1952	1951	1942-51
Columbia R., nr. The Dalles <sup>1</sup>	120,000.0		121	c	99,025.0	97,779.0
<u>NORTHCENTRAL OREGON</u>						
Hood R., nr. Hood River <sup>2</sup>	318.0		94	324.7	358.8	339.7
Hood R., nr. Hood River <sup>2</sup>		260.0	90	235.7	305.0	289.6
Hood R., W. Fk., nr. Dee	155.0		95	155.8	156.4	162.7
Hood R., W. Fk., nr. Dee		135.0	95	135.9	135.4	141.4
White R., below Tygh Valley	156.0		92	171.2	202.6	170.0
White R., below Tygh Valley		140.0	93	153.7	184.3	150.5
<u>UMATILLA-WALLA WALLA</u>						
Walla Walla R., So. Fk., nr. Milton	62.0		83	85.0	73.5	75.1
Walla Walla R., So. Fk., nr. Milton		49.0	79	70.4	58.7	61.8
Umatilla R., nr. Gibbon	61.0		64	103.0	77.2	95.8
Umatilla R., at Pendleton	115.0		61	184.8	138.0	188.1
Umatilla R., at Pendleton		112.0	61	180.5	133.8	183.5
McKay Cr., nr. Pilot Rock	19.0		59	23.3	17.6	32.0
McKay Cr., nr. Pilot Rock		18.7	59	23.2	17.6	31.8
<u>NORTHEASTERN OREGON</u>						
Grande Ronde R., at La Grande	126.0		63	183.2	165.1	200.7
Catherine Cr., nr. Union	65.0		90	90.6	62.7	72.0
Bear Cr., nr. Wallowa	71.0		97	79.7	56.5	73.3
Lostine R., nr. Lostine	128.0		99	145.8	110.0	129.0
Hurricane Cr., nr. Joseph	44.0		94	55.3	41.0	46.7
Wallowa R., E. Fk., nr. Joseph <sup>3</sup>	10.0		87	12.6	9.8	11.5
Wallowa R., E. Fk., nr. Joseph <sup>3</sup>		8.0	86	10.3	7.5	9.3
Imnaha R., at Imnaha	290.0		96	424.3	267.5	300.7
Powder R., at Salisbury	50.0		77	88.7	69.8	64.7
Powder R., at Salisbury		48.0	77	87.1	68.8	62.7
Burnt R., nr. Hereford <sup>4</sup>	27.0		60	65.2	43.0	45.1

\*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1953 records not available at this time.

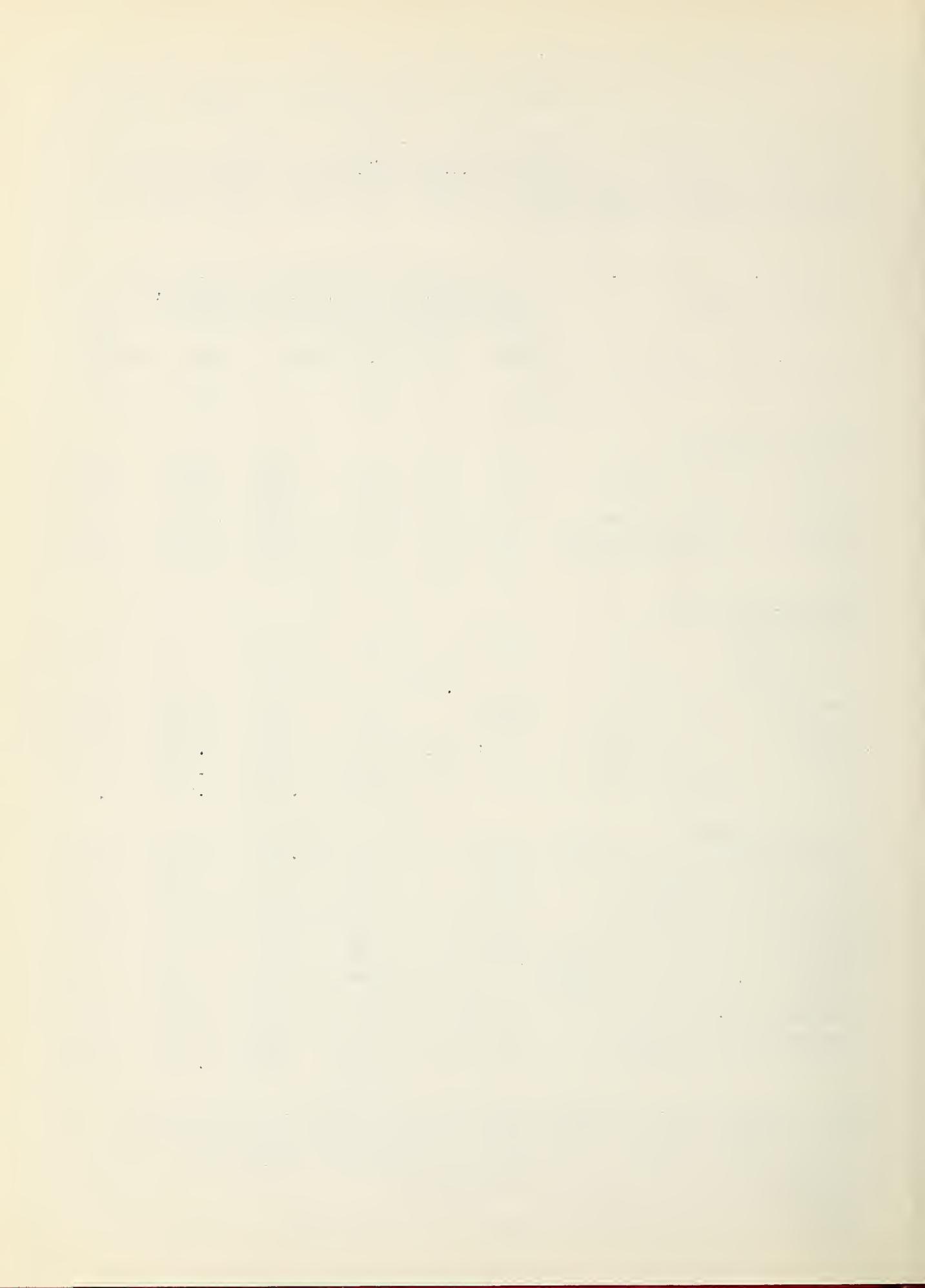
1Forecast by Boise Office, Soil Conservation Service. Corrected for storage.

2Observed flow plus P.P. & L. Co. power canal.

3Includes power plant tailrace.

4Observed flow plus change in storage in Unity reservoir.

cRecords not available.



## Streamflow Forecasts - April 1, 1954 (Cont'd)

BASIN AND STREAM	Seasonal Streamflow in Thousand A.F.					
	Forecast	1954	%	Measured Runoff*	10-Yr.	
	Apr-Sept.	Apr-July	10-Yr. Avg.	1952	1951	Avg. 1942-51
<u>EASTERN OREGON</u>						
Malheur R., nr. Drewsey	54.0		72	192.2	72.3	74.5
Malheur R., N.Fk., at Beulah <sup>5</sup>	45.0		75	122.0	54.4	60.1
Owyhee Res., net inflow <sup>6</sup>	240.0		57	1,434.8	417.8	415.8
Owyhee Res., net inflow <sup>6</sup>		200.0	51	1,432.4	396.2	395.0
John Day R. at Prairie City <sup>7</sup>	50.0		95	67.2	44.3	52.8
John Day R. at Prairie City <sup>7</sup>		45.0	94	58.0	40.6	47.9
John Day R., Mid. Fk. at Ritter	116.0		89	172.6	115.4	131.0
John Day R., N.Fk., nr. Dale	238.0		89	309.8	255.8	266.4
Strawberry Cr., nr. Prairie City	7.5		89	10.5	7.9	8.4
<u>HARNEY BASIN</u>						
Silvies R., nr. Burns	55.0		55	c	116.4	100.4
Donner und Blitzen R., nr. Frenchglen		55.0	86	123.4	58.7	63.9
Trout Cr., nr. Denio	7.5		88	24.5	8.2	8.5
<u>CENTRAL OREGON</u>						
Ochoco Res., net inflow <sup>8</sup>	15.0		46	44.9	38.4	32.8
Crooked R., nr. Post	65.0		51	205.8	128.0	128.3
Crescent Cr. at Crescent Lake <sup>9</sup>	35.0		153	47.2	41.8	22.9
Little Deschutes R., nr. Lapine <sup>9</sup>	100.0		105	c	126.1	95.1
Little Deschutes R., nr. Lapine <sup>9</sup>		95.0	114	c	98.5	83.0
Odell Cr., nr. Crescent	31.3		101	44.1	36.0	30.9
Deschutes R., below Snow Cr.	70.0		106	c	101.1	65.8
Crane Prairie Res., inflow <sup>10</sup>	145.0		112	c	182.9	129.4
Deschutes R., at Pringle Falls <sup>11</sup>	312.0		110	c	380.4	282.5
Deschutes R., at Pringle Falls <sup>11</sup>		190.0	117	c	161.1	161.9
Deschutes R., at Benham Falls <sup>12</sup>	570.0		110	c	707.1	519.0
Deschutes R., at Benham Falls <sup>12</sup>		388.0	111	c	473.4	348.0
Tumalo Cr., nr. Bend <sup>13</sup>	51.0		101	c	59.0	50.7
Squaw Cr., nr. Sisters	54.0		105	c	62.4	51.3

\*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1953 records not available at this time.

<sup>5</sup>Observed flow + change in storage in Agency Valley Reservoir.

<sup>6</sup>From U.S.B.R. records of inflow.

<sup>7</sup>Observed flow + Prairie Power Canal.

<sup>8</sup>Observed flow of Ochoco Cr. + Canal + changes in storage of Ochoco Res.

<sup>9</sup>Observed flow + changes in storage of Crescent Lake Reservoir.

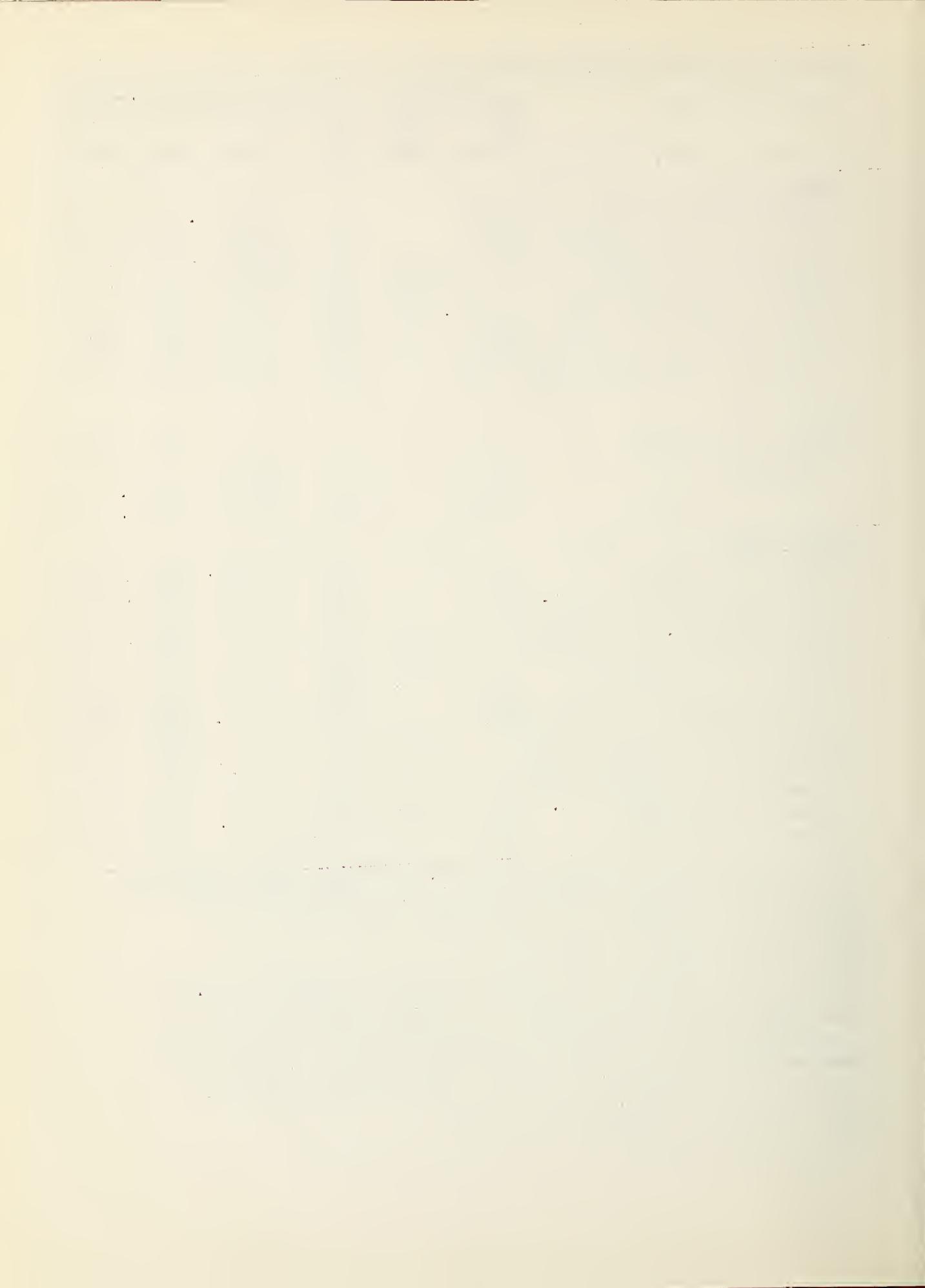
<sup>10</sup>From State Engineer's file #3220a, tabulating total inflow to Crane Prairie Reservoir and outflow, showing the loss in the Reservoir.

<sup>11</sup>Observed flow + changes in storage in Crane Prairie and Wickiup Res.

<sup>12</sup>Observed flow + changes in storage in Crane Prairie, Wickiup and Crescent Lake Reservoirs.

<sup>13</sup>Observed flow + Columbia Southern Canal.

c Records not available.



## Streamflow Forecasts - April 1, 1954 (Cont'd)

BASIN AND STREAM	Seasonal Streamflow in Thousand A.F.					
	Forecast 1954		%	Measured Runoff*		10-Yr.
	Apr. Sept.	Apr- July	10-Yr. Avg.	1952	1951	Avg. 1942-51
<u>SOUTHCENTRAL OREGON</u>						
Twentymile Cr. nr. Adel	16.0 <sup>a</sup>	99		77.1	14.2	16.2
Deep Cr., above Adel	65.0 <sup>a</sup>	98		129.2	71.9	66.6
Honey Cr. nr. Plush	14.6 <sup>a</sup>	99		29.9	15.8	14.8
Drew Reservoir, net Inflow	31.0		155	c	23.3	20.0
Chewaucan R.,nr. Paisley	100.0 <sup>a</sup>	145		150.3	88.4	68.8
<u>KLAMATH BASIN</u>						
Sprague R.,nr. Chiloquin	310.0		133	561.6	282.2	232.8
Williamson R., below Sprague R.	492.0		129	831.3	457.6	380.4
Williamson R., below Sprague R.	425.0		135	746.5	391.4	315.6
Upper Klamath Lake,net Inflow <sup>14</sup>	680.0		140	1,151.2	611.0	486.7
Upper Klamath Lake,net Inflow <sup>14</sup>	560.0		144	1,005.3	509.3	388.8
Clear Lake Res., net Inflow	37.0		91	157.0	32.4	40.7
Gerber Res., net Inflow	19.0		101	79.2	12.3	18.8
<u>SOUTHERN OREGON</u>						
Applegate R., nr. Ruch	198.0		177	c	99.9	111.7
Illinois R., at Kerby	213.0		120	241.8	114.4	177.9
Hyatt Res., net Inflow <sup>15</sup>	6.4		112	9.0	3.8	5.7
Fourmile Lake, net Inflow <sup>16</sup>	7.0		92	10.0	3.5	7.6
Little Butte Creek, N. Fk., below Fish Lake <sup>17</sup>	15.3		100	c	15.6	15.3
Rogue River above Prospect	357.0		111	477.1	345.5	320.3
Rogue River above Prospect		308.0	115	404.9	282.3	267.8
Rogue River, Mid. Fk., nr. Prospect <sup>18</sup>	76.0		100	c	77.8	76.1
Rogue River, Mid. Fk., nr. Prospect <sup>18</sup>		60.0	100	c	59.7	60.2
Rogue R. So.Fk.,nr.Prospect <sup>19</sup>	80.0		103	c	76.2	77.9
Rogue R. So.Fk.,nr.Prospect <sup>19</sup>		69.0	104	c	64.4	66.5

\*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1953 records not available at this time.

<sup>14</sup>From COPCO records of inflow.

<sup>15</sup>Observed flow of Keene Creek at Hyatt Prairie + storage changes + 1600 a.f. for estimated evaporation during April-September period.

<sup>16</sup>Observed outflow into Cascade Canal + storage changes + 1600 a.f. for estimated evaporation during April-September period.

<sup>17</sup>Observed flow plus changes in storage in Fish Lake Reservoir + 90% of Cascade Canal inflow.

<sup>18</sup>Observed flow + Middle Fork Power Canal.

<sup>19</sup>Observed flow + South Fork Power Canal.

<sup>a</sup>April-June rather than April-July.

<sup>c</sup>Records not available.



## Final Oregon Streamflow Forecasts - April 1, 1954 (Cont'd)

BASIN AND STREAM	Seasonal Streamflow in Thousand A.F.					
	Forecast 1954		% Measured Runoff*	10-Yr.	Avg.	
	Apr-Sept.	Apr-July	10-Yr. Avg.	1952	1951	1942-51
<u>SOUTHERN OREGON (Cont'd)</u>						
Rogue R., below South Fork	730.0		106	c	739.0	686.5
Rogue R., below South Fork		610.0	109	c	588.5	557.2
Rogue R., at Raygold, nr. Central Point	990.0		108	c	887.7	912.8
Rogue R., at Raygold, nr. Central Point		850.0	111	c	727.4	766.2
Rogue R., at Grants Pass	950.0		108	c	823.9	878.7
Clearwater R., above Trap Cr.	65.0		99	86.7	80.8	65.4
No. Umpqua River, below Lake Creek	170.0		101	217.6	195.7	169.1
No. Umpqua River, at Toketee Falls <sup>20</sup>	398.0		101	519.4	445.3	393.8
<u>WILLAMETTE VALLEY</u>						
Row River, near Dorena	110.0		101	c	64.1	108.7
Row River, near Dorena		105.0	101	104.3	61.9	104.4
Willamette R., Mid.Fk. at Lowell <sup>21</sup>	916.0		103	1,105.1	796.9	889.3 <sup>b</sup>
Willamette R., Mid.Fk. at Lowell <sup>21</sup>		809.0	102	872.0	696.9	789.5 <sup>b</sup>
McKenzie R., at McKenzie Bridge	608.0		103	574.2	658.4	591.6
McKenzie R., at McKenzie Bridge		467.0	102	512.2	501.5	452.6
McKenzie R., near Vida	1290.0		102	1,434.3	1,276.0	1,266.6
McKenzie R., near Vida		1060.0	102	1,185.0	1,025.0	1,041.8
South Santiam at Waterloo	586.0		98	640.3	464.3	600.9
South Santiam at Waterloo		552.0	97	610.3	442.6	568.6
No. Santiam at Mehama <sup>21</sup>	955.0		106	1,016.4	798.4	899.4
No. Santiam at Mehama <sup>21</sup>		857.0	107	917.3	706.8	802.8
Willamette R. at Salem <sup>21</sup>	4996.0		98	5,607.6	4,281.3	5,121.8
Willamette R. at Salem <sup>21</sup>		4475.0	98	4,977.5	3,749.4	4,585.5
Clackamas R., at Big Bottom	173.0		100	192.0	192.8	173.2
Clackamas R., at Big Bottom		141.0	100	158.2	155.9	141.1
Oak Grove Fk. abv. Power Intake	192.0		98	208.7	229.4	196.1
Oak Grove Fk. abv. Power Intake		151.0	98	164.8	180.8	154.3
Clackamas R., above Three Lynx	664.0		104	711.8	681.7	636.6
Clackamas R., above Three Lynx		570.0	105	617.9	575.6	542.0
Clackamas R., nr. Cazadero	873.0		105	823.1	817.2	829.8
Clackamas R., nr. Cazadero		760.0	106	770.3	699.8	717.5

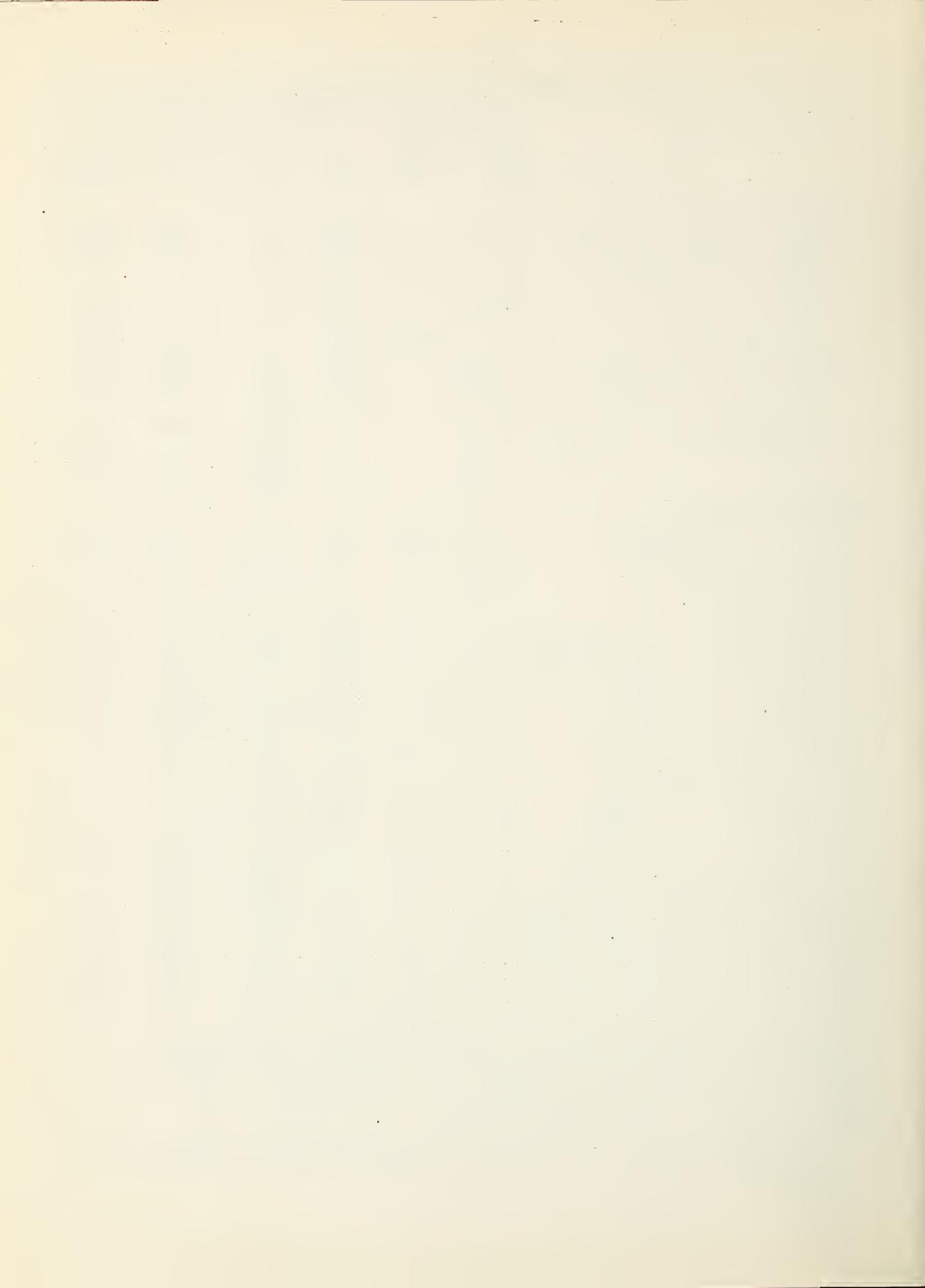
\*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1953 records not available at this time.

<sup>20</sup>Sum of observed flow at North Umpqua River above Clearwater River (#7424) and Clearwater River at Mouth (#7423)

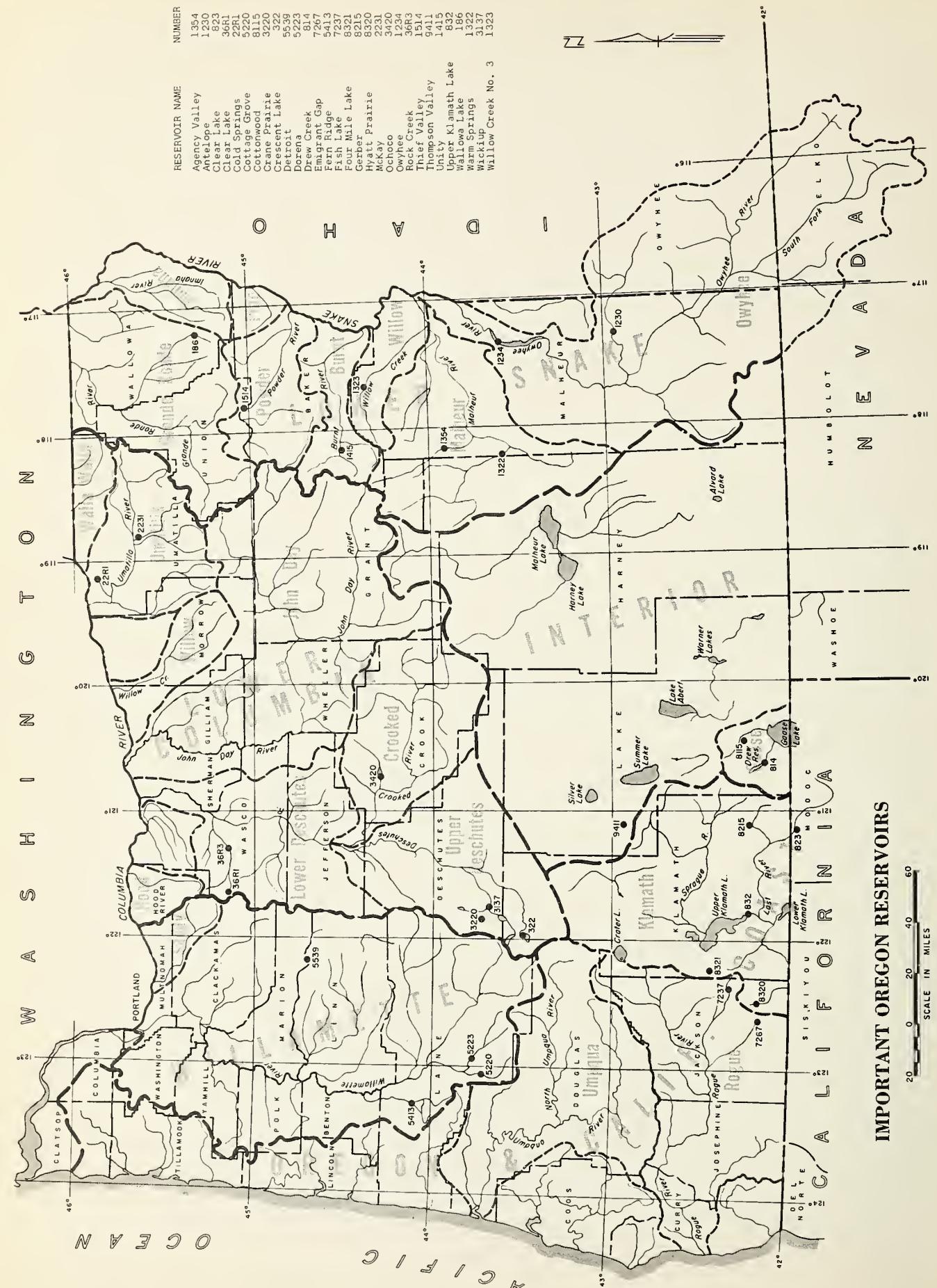
<sup>21</sup>Observed flow + changes in storage in any of the following reservoirs which are above the station: Lookout Point, Detroit, Fern Ridge, Cottage Grove and Dorena.

<sup>b</sup>Estimated as percentage of flow at Eula.

<sup>c</sup>Records not available.







## IMPORTANT OREGON RESERVOIRS

STATUS OF OREGON RESERVOIR STORAGE - APRIL 1, 1954

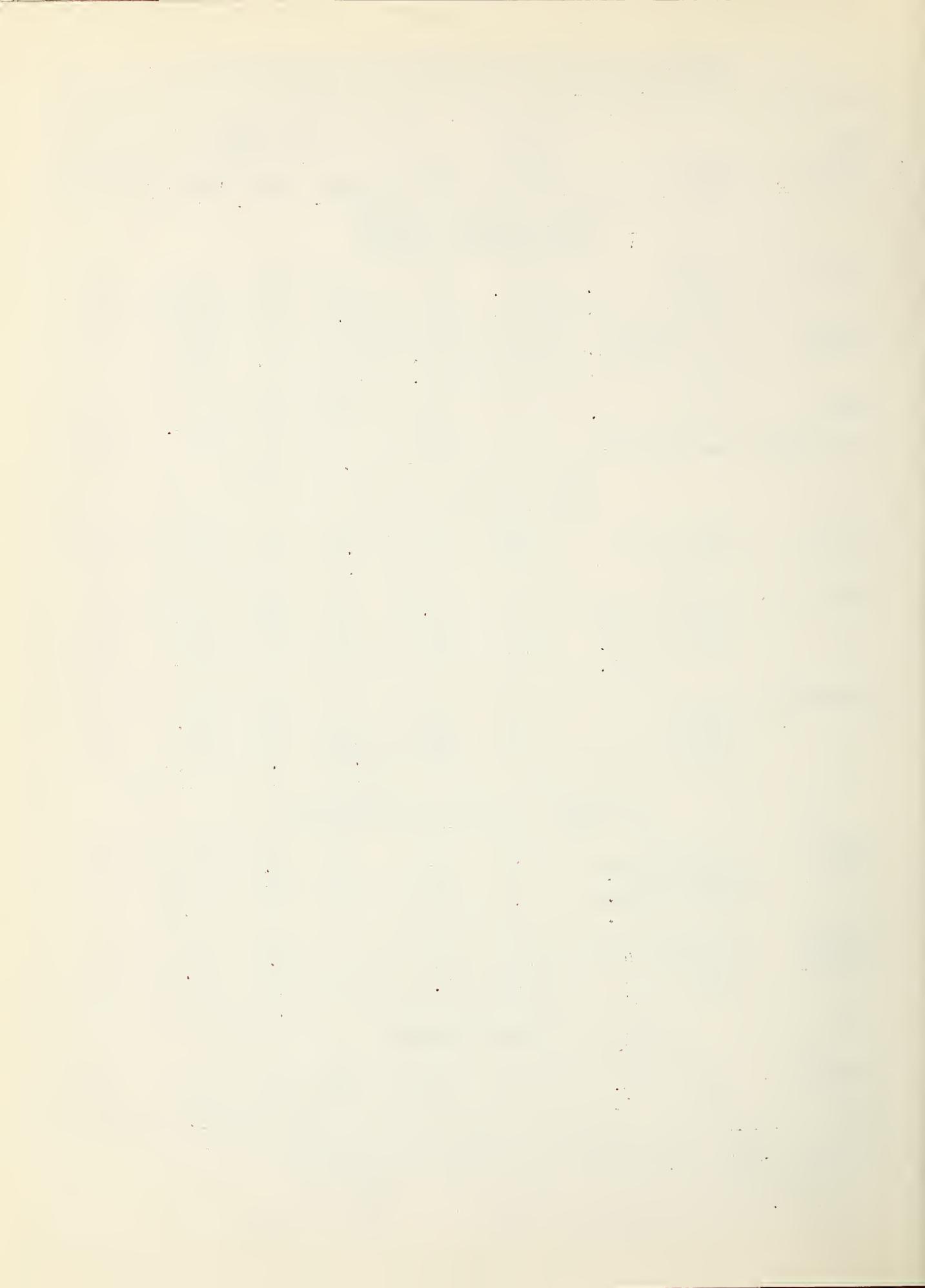
BASIN and STREAM	RESERVOIR	USABLE CAPACITY (M.A.F.)	THOUSAND ACRE FEET IN STORAGE ABOUT APRIL FIRST					10-Yr. Avg. 1951 1942-51
			1954	1953	1952	1951	1942-51	
			<u>UPPER COLUMBIA DRAINAGE</u>					
<u>Owyhee</u>	Antelope	36.5	27.7	19.3	13.3	33.0	17.9	
	Owyhee	715.0	533.7	574.4	539.2 <sup>e</sup>	715.0	566.0	
<u>Malheur</u>	Warm Springs	191.0	139.9	164.4	93.4	82.6	111.9	
	Agency Valley	60.0	38.8	46.6	38.7	32.8	47.9	
<u>Burnt</u>	Unity	25.2	15.4	14.9	7.1 <sup>e</sup>	14.7	13.7	
<u>Grande Ronde</u>	Wallowa Lake	40.9	32.8	27.8	11.4	17.9	20.5	
<u>LOWER COLUMBIA DRAINAGE</u>								
<u>Umatilla</u>	McKay	74.0	43.9	65.3	44.6	64.3	64.0	
	Cold Springs	50.0	50.0	44.2	49.6 <sup>e</sup>	50.0	47.9	
<u>Deschutes</u>	Ochoco	46.0	46.8 <sup>e</sup>	46.8	33.0 <sup>e</sup>	43.2	30.2	
	Crescent Lake	54.9	38.7 <sup>f</sup>	52.0	47.3	49.0	43.3	
	Crane Prairie	55.3	56.2	50.7	47.1	54.6	39.9	
	Wickiup	187.3	199.8	199.1	177.1	188.4	105.1 <sup>d</sup>	
<u>Willamette</u>	Cottage Grove	30.1 <sup>a</sup>	15.8	19.8	19.4	19.6	18.2 <sup>d</sup>	
	Dorena	70.5 <sup>a</sup>	34.8	35.7	35.6	35.2	--	
	Fern Ridge	94.2 <sup>a</sup>	62.4	65.4	63.7	62.8	55.6	
	Detroit	340.0 <sup>a</sup>	216.6	150.9 <sup>g</sup>	--	--	--	
<u>OREGON AND CALIFORNIA COAST DRAINAGE</u>								
<u>Rogue</u>	Fish Lake	7.8	7.0	6.8	5.7	6.1	4.9	
	Fourmile Lake <sup>b</sup>	16.1	15.1	14.7	6.3	12.6	7.0	
	Emigrant Gap	8.3	8.3	8.3	8.3	8.3	7.9	
	Hyatt Prairie <sup>b</sup>	16.1	14.5	13.2	4.6	6.7	6.2	
<u>Klamath</u>	Upper Klamath Lk.	584.0 <sup>c</sup>	492.5	503.0	382.6	500.9	430.7	
	Gerber	94.0	73.1	77.1	26.2	57.6	44.3	
	Clear Lake	440.2	319.8	280.6	156.8	139.3	237.0	
<u>INTERIOR DRAINAGE</u>								
<u>Goose Lake</u>	Cottonwood	4.1	1.3	1.9	f	2.9	1.3 <sup>d</sup>	
	Drew	62.5	56.4	53.9	45.2	63.0	47.8	

N.R.--No Report.

<sup>a</sup>Storage space reserved for flood control.<sup>b</sup>By ditch to Rogue River side from

Klamath Drainage.

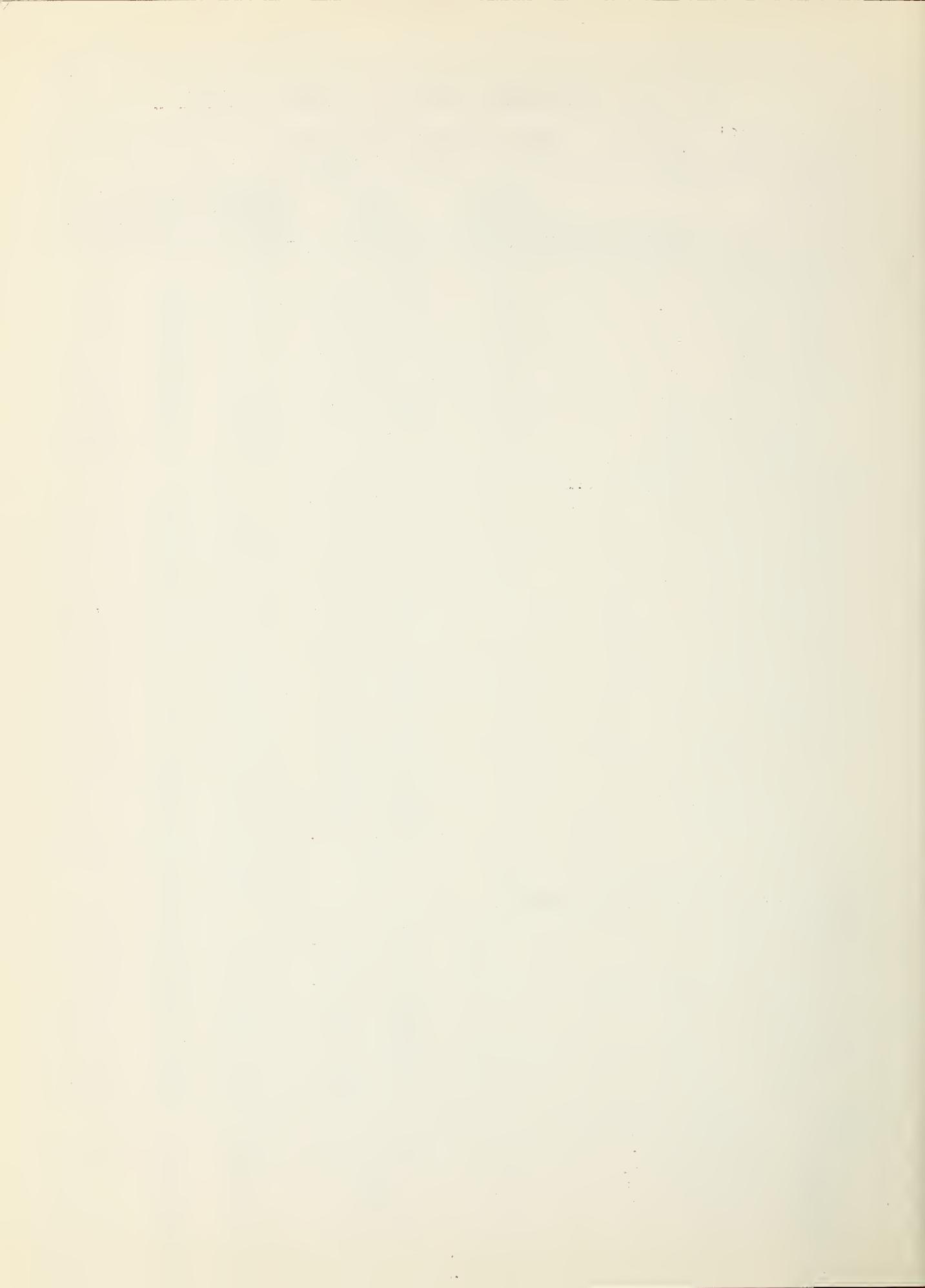
<sup>c</sup>Based on gage zero elevation of 4135.0.<sup>d</sup>1943-51<sup>e</sup>Spilling.<sup>f</sup>Not full; spilling.<sup>g</sup>Gross Storage.



COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Oregon stream basins presents the water content of the snow about April 1, 1954, as percent of the same date in 1953 and 1952 and average of record:

DRAINAGE	No. of Courses Averaged	Yrs. of Record	April 1, 1954- Water Content as percent of:		
			1953	1952	Avg.
<u>UPPER COLUMBIA DRAINAGE (Lower Snake in Oregon)</u>					
Owyhee River	12 - 17	11 - 26	77	31	59
Malheur River	5	13 - 24	61	41	74
Burnt River	4	15 - 19	61	50	75
Powder River	7	15 - 18	74	66	85
Pine Creek	1	16	69	59	88
Imnaha River	2	12 - 19	82	83	103
Grande Ronde River	10 - 11	12 - 25	79	75	90
Wallowa River	2	12 - 19	82	83	103
Catherine Creek	2	16	74	67	83
Main Grande Ronde	6 - 7	14 - 25	80	73	86
<u>LOWER COLUMBIA DRAINAGE</u>					
Walla Walla River	1	23	84	71	91
Umatilla River	5	15 - 25	63	61	74
Willow Creek	1	25	52	62	82
John Day River	13	10 - 25	74	65	89
North Fork	5	15 - 25	76	77	96
Middle Fork	4	18 - 19	77	66	92
Main Branch	4	17 - 24	74	60	89
South Fork	2	10 - 18	74	52	81
Crooked River	4	10 - 25	71	51	81
Deschutes River	11	13 - 24	99	73	117
Hood River	3	16 - 21	105	89	115
Willamette Valley	14	13 - 24	102	74	113
Sandy River	3	16 - 22	103	87	109
Clackamas River	3	13 - 22	133	94	117
Santiam Rivers	3	13 - 15	102	74	114
McKenzie River	3	13 - 15	92	74	110
Middle Fork	4	13 - 24	104	66	119
Ccast Fork	1	15	116	62	128
Mary's River	.1	13	62	33	71
<u>OREGON AND CALIFORNIA COAST DRAINAGE</u>					
Umpqua River	4	16 - 25	97	66	125
Rogue River	12 - 16	10 - 23	94	67	114
Upper Rogue	5 - 7	10 - 21	91	64	107
Bear-Little Butte Creek	2 - 4	19 - 23	97	75	111
Applegate River	5	12 - 19	102	74	135
Illinois River	2	17 - 18	108	55	122
Klamath Lake Basin	17 - 20	10 - 27	92	59	109
Williamson River	11 - 12	10 - 26	91	62	109
Sprague River	6 - 7	13 - 26	107	56	132
Gerber-Clear Lake Basin	2 - 3	13 - 23	98	45	122
<u>INTERIOR DRAINAGE</u>					
Goose Lake Basin	3 - 4	13 - 23	97	47	114
Warner Lake Basin	1	15	96	51	103
Guano Lake Basin	1	19	14	11	18
Silver Lake Basin	1	13	Inf.	90	62
Chewaucan River	3	15 - 23	102	66	144
Harney Basin	9	10 - 23	77	43	77
Alvord Lake Basin	--	--	--	--	--
McDermitt Creek	--	--	--	--	--



## IRRIGATION WATER SUPPLY FORECASTS

## SEASON OF 1954

## - Foreword -

Measurements of snow depth and water content were secured on 141 Oregon snow courses as near April 1 as possible. Results of surveys have been computed and furnished in advance of publication to about 26 agencies requesting them. All data are published by the 9th of each month.

Local Water Forecast Committee Meetings were held again this year in nine important irrigated regions of the State during the period March 29 through April 7 as follows: Hood River for Northcentral Oregon; Bend for Central Oregon; Burns for Harney Basin; Canyon City for John Day Basin; Pendleton for Umatilla-Walla Walla Basin; La Grande for Northeastern Oregon; Vale for Southeastern Oregon; Lakeview for Southcentral Oregon; and Medford for Southern Oregon.

These water meetings were jointly sponsored this year by U. S. Soil Conservation Service, Oregon State College Agricultural Experiment Station, and U. S. Weather Bureau, Portland River Forecast Center. A representative of each of the three agencies was present at all meetings and in addition an Information Specialist of the Extension Service prepared news releases for each of the meetings.

Most of the 40 cooperating agencies listed on the last page of this report were represented at these discussions.

Each Committee's report, outlining the irrigation water prospect for 1954 in its respective area, is summarized below. Modifications of these forecasts may be required later in accordance with deviations of precipitation and temperature from normal during the runoff season.

## - Forecasts -

Northcentral Oregon

Good to excellent water supplies for irrigation are expected in Hood River and Wasco Counties in 1954 with mountain snow-cover now equal to the 10-year (1942-51) average and from 15 to 22 percent greater than last year. Regulation of water, usually necessary by July 1 will probably be delayed until early August this year in small Wasco County streams.

Hood River Valley lands irrigated from the West Fork of Hood River will have adequate water with the expected flow forecast at 155,000 acre feet or 95 percent of the 10-year average for April-September. The first four months, April-July, is expected to bring 135,000 a.f. compared with the 10-year average of 141,400 acre feet.

Flow of the Middle and East Forks of Hood River is not measured but these streams should provide adequate water for irrigation this season.

Discharge of Hood River near Hood River plus the power canal is forecast at 318,000 acre feet or 94 percent of the 1942-51 average for the next six months. The first four months, April-July, will see 260,000 acre feet out of this total flow pass the gaging station.



Lands on the west side of Hood River Valley served from the Mt. Defiance-Greenpoint source have a satisfactory outlook with present snow-cover nearly three times that of last year. A total of 25.4 inches of water were measured in the snow compared with 9.0 inches last year.

Soils in the Hood River Valley are well wetted. This is also true of the high watersheds, a factor which will be favorable to an increased runoff from melting snow-cover.

Wasco County lands should have adequate irrigation water supplies this year. Snow-cover at Brooks Meadows has a water content of 16.9 inches compared with 10.5 inches last year and a 10-year average of 14.7 inches.

Flow of the Mile Creeks and Mill Creek is expected to be above average and should hold up well into August.

Discharge of White River at Tygh Valley is forecast at 156,000 acre feet or 92 percent of the 10 year average for April-September. About 140,000 acre feet should be received by the end of July.

Elsewhere on the White River watershed the flow of Rock, Gate and Badger Creeks should be well above average and adequate for all except the latest water rights.

Clear Creek and Frog Creek should produce about the same water supply as last year. The snow at Clear Lake snow course contains 15.4 inches of water compared with 11.2 inches last year and a 10-year average of 15.2 inches.

#### Central Oregon

Snow-cover varies from 117 percent normal on the Upper Deschutes to 81 percent normal on the Crooked River watershed. Adequate water will be available for lands served from the Deschutes River but supplies in the Crooked River basin will fall somewhat short except where storage water is available.

The Little Deschutes near Lapine is forecast to discharge 100,000 acre feet or 105 percent of the 10-year average for the six months April-September. The first four months April-July should bring 95,000 acre feet of this amount. This flow is good enough to assure adequate water for lands in the Lone Pine area.

April-September discharge of Crescent Creek at Crescent Lake is forecast at 35,000 acre feet compared with the 10-year average of 22,900 acre feet or 153 percent of average. This heavy flow will easily make up for the required lowering of the stored water in Crescent Lake assuring adequate supplies.

Crescent Lake Reservoir now holds 38,700 acre feet and is being lowered to 38,000 acre feet for construction and inspection purposes.

Odell Creek near Crescent has a 10-year average streamflow of 30,900 acre feet for April-September. Forecast for discharge for that period this year is 31,300 acre feet or 101 percent of average.

Davis Lake above Wickiup Reservoir will continue to stand at a high level.



It may possibly surpass the historically high level which it reached the summer of 1952.

The Deschutes River below Snow Creek, just above Crane Prairie Reservoir, is forecast at 70,000 acre feet for the period April through September. This flow will be 106 percent of the 10-year average of 65,800 acre feet.

Total inflow to Crane Prairie Reservoir averages 129,400 acre feet for the 10-year period 1942-51 and is expected to be 145,000 acre feet or 112 percent for the April-September period this year. There is much evidence to indicate that the continuing series of good water years is greatly increasing the amounts of underground water in the head of the Deschutes River.

Crane Prairie Reservoir is full and spilling with 56,200 acre feet of water held there on April 1st. The 10-year average storage is 40,000 acre feet.

Wickiup Reservoir is also full and spilling with a total of 199,800 acre feet in storage compared to an average of 105,000 acre feet at this date.

Flow of the Deschutes at Pringle Falls for the April-September period is forecast at 312,000 acre feet or 110 percent of the 10-year average. The first four months, April-July, should bring 190,000 acre feet.

The April-September flow of the Deschutes at Benham Falls is forecast at 570,000 acre feet compared with the 10-year average of 519,000 acre feet. April-July should bring 388,000 acre feet of this flow. This high flow will be adequate for all purposes in 1954.

Flow of Tumalo Creek and Columbia Southern Canal is forecast at 51,000 acre feet compared with the average of 50,700 acre feet for the next six months. The Tumalo Project should have adequate water supplies this season.

Squaw Creek near Sisters is forecast to discharge 54,000 acre feet April through September compared with the 10-year average discharge of 51,300 acre feet. The Plainview and McAllister Ditches should have good water supplies until early July and possibly later.

On the Crooked River watershed the net inflow to Ochoco Reservoir is expected to be 15,000 acre feet in the next six months. This inflow will be only 46 percent of average but added to the present 46,800 acre feet held in the reservoir it will be sufficient for this season.

Forecast of discharge of the Crooked River near Post for April - September is 65,000 acre feet compared with the 10-year average of 128,300 acre feet. This low flow should provide one good irrigation and, with good May-June rain could be a satisfactory supply.

Lands irrigated from Hay and Trout Creeks in Jefferson County will have a sufficient water supply for one irrigation only.

#### Harney Basin

Snow-cover in Harney Basin is 77 percent of average but soils are generally well wetted. Water supplies are forecast to be better than were expected



last year but still only one adequate irrigation can be foreseen.

Silver Creek, west of Burns, has already had its main flow with most of the area well irrigated. The snow now remaining in the timber will sustain the low flow well into the fall months. Lands in the Warm Springs Valley are much better off than a year ago.

Discharge of Silvies River near Burns is forecast at 55,000 acre feet for April-September compared with an average of 100,400 acre feet. Much depends on the April-June rains as to the adequacy of irrigation water this year.

The smaller creeks west of Burns, Rattlesnake, Soldier, Coffee Pot, Cow and Rock Creek, have already made their main run but low flow of these streams would come up rapidly with early summer rains.

Flow of the Donner und Blitzen River near Frenchglen is forecast at 55,000 acre feet compared with the average of 63,900 acre feet. Good water supplies are expected from this source.

Water supplies in the Catlow Valley area should be sufficient for one irrigation but are apt to be short late in the season.

Trout Creek near Denio will probably discharge about 7,500 acre feet compared with the 10-year average of 8,500 acre feet. This should be adequate for at least one good irrigation.

#### John Day Basin

Snow-cover on the John Day watersheds is 89 percent average but only 74 percent of last year. Mountain watershed soils are well wetted and forecasts of streamflow indicate a fairly adequate water supply will be available.

Flow of the John Day at Prairie City combined with the power canal is forecast at 50,000 acre feet or 95 percent of the 10-year average.

Forecast for Strawberry Creek near Prairie City is for 7,500 acre feet or 89 percent of the 10-year April-September average.

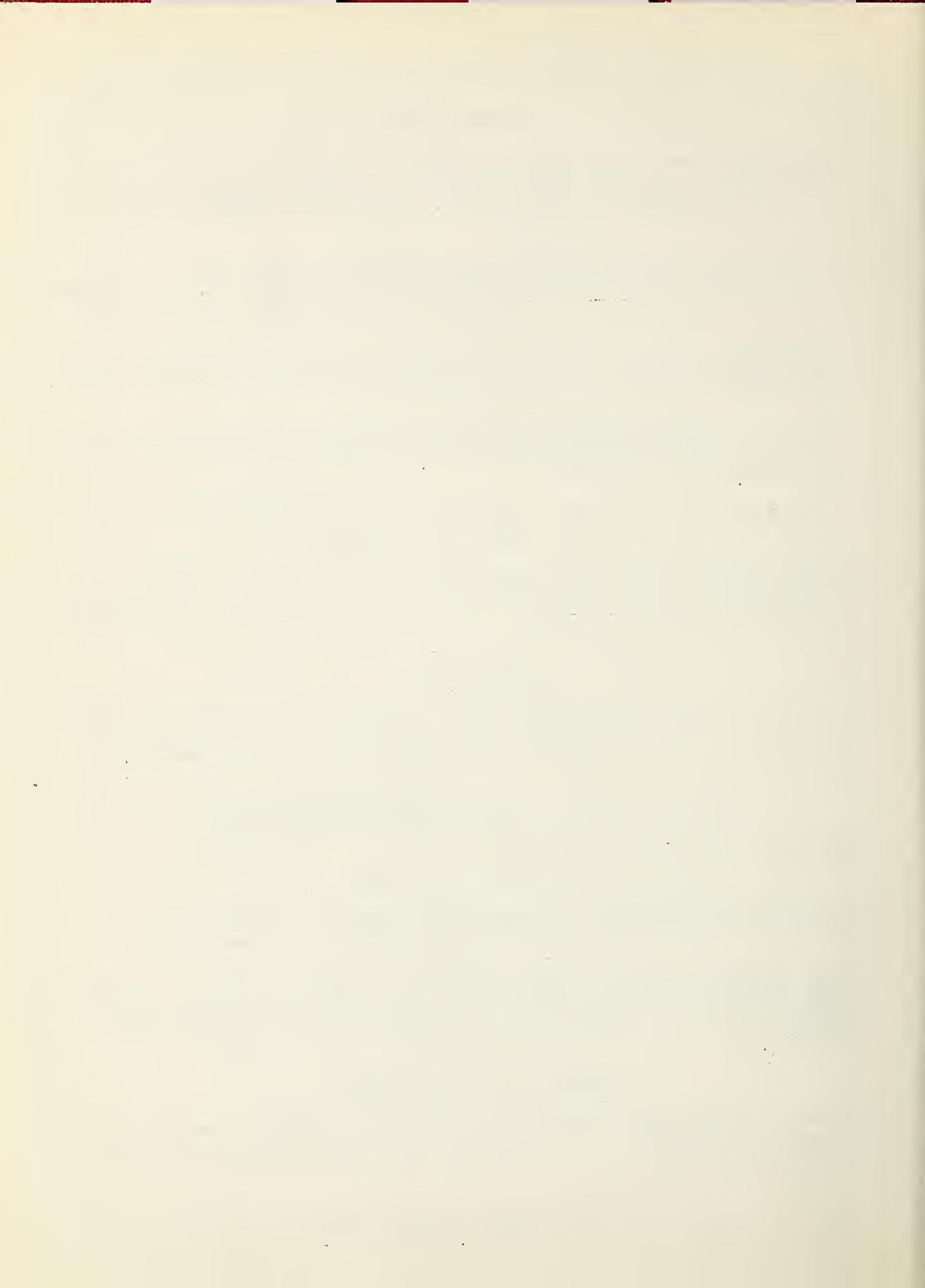
Discharge of Middle Fork of the John Day at Ritter is forecast at 116,000 acre feet for April-September compared with 131,000 acre feet average.

North Fork of the John Day River near Dale is forecast at 238,000 acre feet or 89 percent of the 10-year average of 266,400 acre feet. Flow of Camas Creek, a tributary of the North Fork, should be adequate for this year's water needs.

#### Umatilla--Walla Walla Basin

Favorable precipitation during the April-June period will be needed to assure adequate water supplies in this area with snow-cover varying from 74 to 90 percent of average.

Flow of the Walla Walla River, South Fork near Milton, is forecast at 62,000 acre feet or 83 percent of the 10-year average of 75,100 acre feet for the next six months. Approximately 49,000 acre feet of this amount should be received by August 1st.



water supplies in the Milton-Freewater area should be satisfactory with shortages for some late water rights served from the Hudson Bay and Pleasant View canals.

Mountain snow-cover on the Umatilla watershed is only 63 percent of last year and 74 percent of average. Watershed soils are not thoroughly wetted and will require snow-melt water to prime them before adequate runoff can be expected.

Flow of the Umatilla River above Meacham Creek is forecast at 61,000 acre feet compared with the 10-year average of 95,800 acre feet for the six months April-September.

Discharge of the Umatilla River at Pendleton is expected to be 115,000 acre feet for April-September or 61 percent of average. The April-July period will bring a total of 112,000 acre feet. Although downstream storage of water is up to average there will be late season shortages for late water rights.

Cold Springs Reservoir is full as of April 1.

Flow of McKay Creek above McKay Reservoir is forecast for 19,000 acre feet April through September. Practically all of this will flow in the next four months.

McKay Reservoir now contains 43,868 acre feet of water and needs about 30,000 acre feet to fill. If McKay Creek flow holds up as forecast the supply will be just barely enough to get by this season.

Soil moisture in the Birch Creek, Butter Creek and Willow Creek watersheds is quite favorable this year but mountain snow-cover is below normal. Water supplies should be sufficient for one good irrigation but late season water is expected to be deficient.

#### Northeastern Oregon

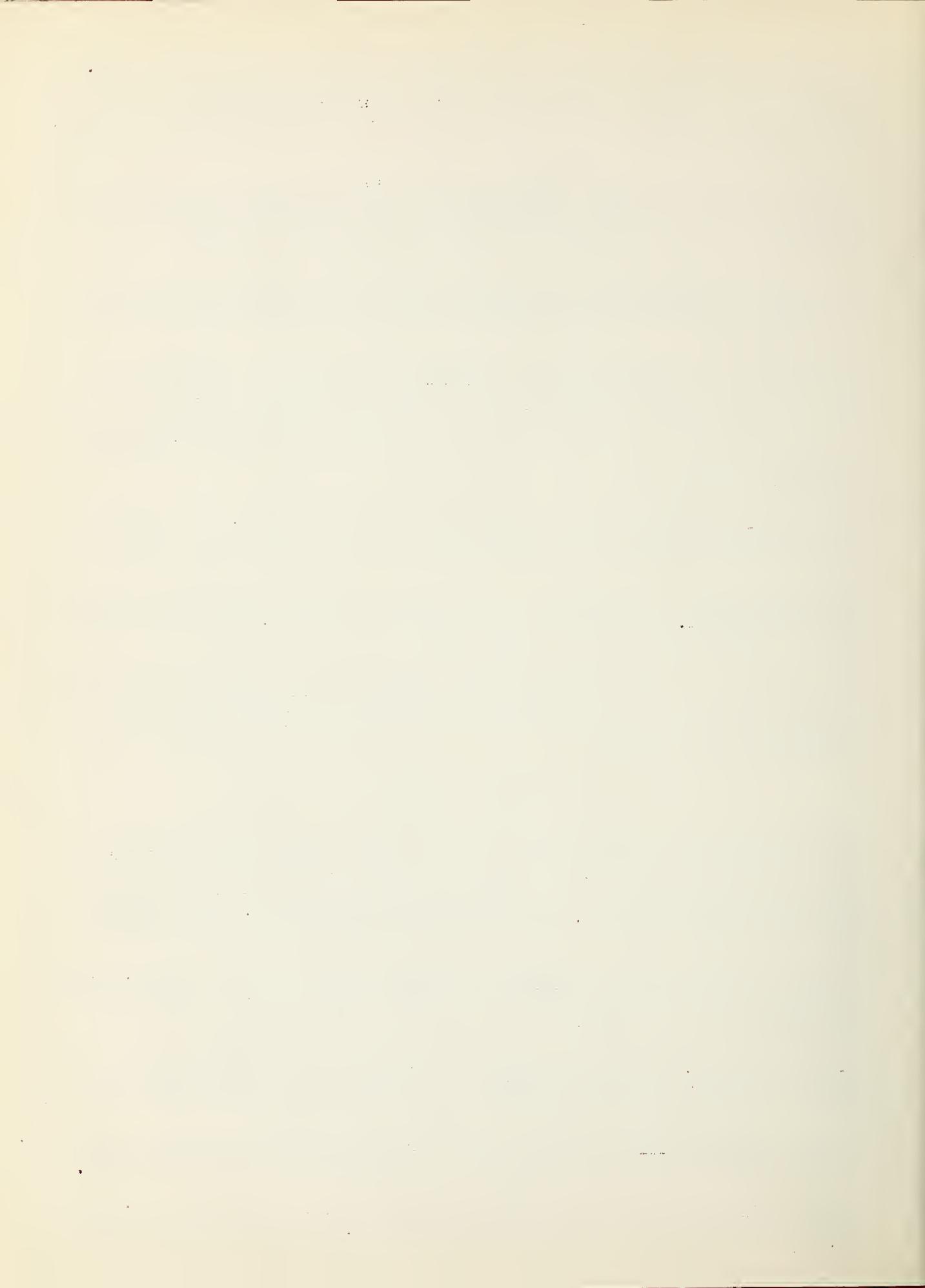
Mountain snow-cover is deficient except for Catherine Creek watershed and soils are relatively poorly wetted in most areas. Irrigation water supplies should be adequate for lands served from the Wallowa River and tributaries, Catherine Creek, Imnaha River, and lands served from storage water in Unity and Thief Valley reservoirs. Shortages can be expected on the main Grande Ronde and on small tributaries of the Powder and Burnt Rivers.

Flow of the Imnaha River at Imnaha is forecast at 290,000 acre feet for April-September or 96 percent of the 10-year average. Ample water will be available for lands in this area.

Wallowa River, East Fork, is forecast at 10,000 acre feet compared with 11,500 acre feet average for April-September. About 8,000 acre feet of this flow will be received by the end of July.

Storage in Wallowa Lake now total 32,800 acre feet compared with 27,800 acre feet last year. This is an adequate water supply for the irrigation season.

Flow of Hurricane Creek near Joseph is forecast at 44,000 acre feet for April-September or 94 percent average. 1952 brought 55,300 acre feet for this same period.



Discharge of Lostine River near Lostine is forecast at 128,000 acre feet compared with the average of 129,000 acre feet. The 1952 flow was 145,800 acre feet.

Bear Creek near wallowa has a 10-year average flow of 73,300 acre feet and the flow this next six months is forecast at 71,000 acre feet. The 1952 flow was 79,700 acre feet for the same six months period.

Catherine Creek, heading in the Wallowa Mountains, can expect a 6 months flow of 65,000 acre feet or 90 percent of the 10-year average.

The main Grande Ronde River at La Grande heads in the Blue Mountains and has a snow-cover only 86 percent average. Discharge for the six months, April-September, is forecast at 126,000 acre feet or 63 percent of the 10-year average. Late water rights can expect to be short early in the season.

Snow-cover on the Powder River watershed is 85 percent average and soils are only poorly wetted. Some irrigation has already been done in Baker Valley.

Discharge of Powder River at Salisbury is forecast at 50,000 acre feet or 77 percent of the 10-year average. The next four months will bring a total of 48,000 acre feet. Late water rights will have a deficient supply from this source.

North Powder River, heading in the Anthony Lake area, has a snow-cover slightly below average and can expect a below average streamflow.

Wolf Creek and Ladd Creek and similar small streams can expect only one irrigation this year.

Eagle and Pine Creeks, heading in the Wallowa Mountains, have a below average snow-cover and can expect reduced streamflow. The Dry Gulch area will be short of water earlier than last year.

Burnt River watershed has a snow-cover only 75 percent average and 61 percent of last year. Soils are poorly wetted and already require water. Except for lands served by stored water the outlook is only fair with late water rights expected to suffer.

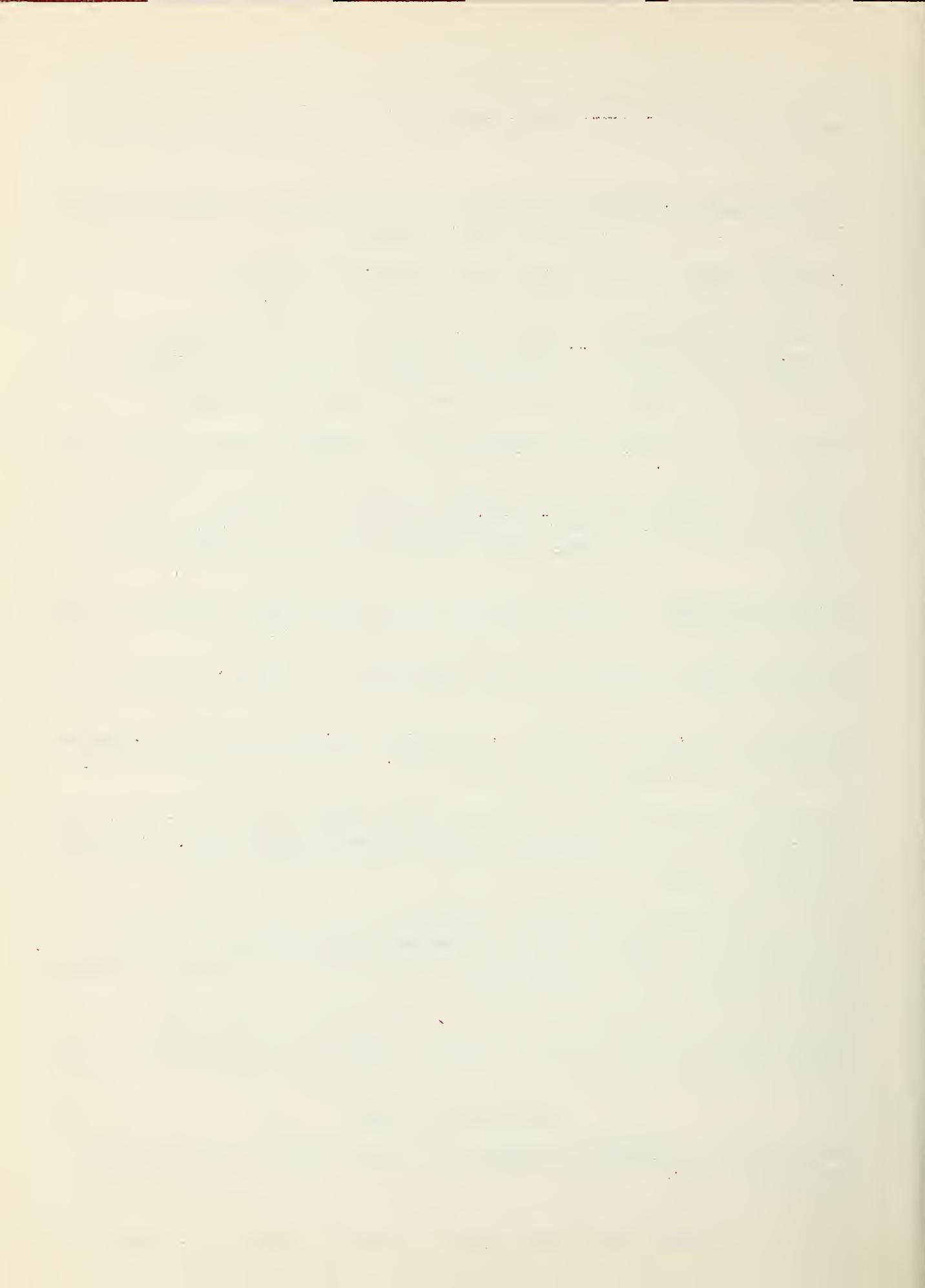
Flow of Burnt River near Hereford (corrected for storage in Unity Reservoir) is forecast at 27,000 acre feet or 60 percent of the 10-year average for April-September. North Fork lands will experience some shortages but supplies should be adequate on the South Fork.

Storage in Unity Reservoir as of April 1 was 15,400 acre feet. This is slightly above average storage. Sufficient water for lands served from this source seem assured.

#### Southeastern Oregon

Snow-cover on the Malheur watershed is 74 percent average but only 61 percent of last year. Watershed soils are poorly wetted but are better than the previous year.

Discharge of Malheur River near Drewsey for the six months, April through



September, is forecast at 54,000 acre feet compared with the average of 74,500 acre feet.

Warmsprings Reservoir has 139,900 acre feet in storage and with indicated inflow should furnish adequate supplies.

Flow of Malheur River, North Fork at Beulah is forecast at 45,000 acre feet for the next six months compared with the 10-year average of 60,100 acre feet.

Agency Valley Reservoir has 38,800 acre feet in storage. A sufficient supply for the present season but with a poor outlook for next year.

Total flow of the Malheur River in March has been extremely low due to colder than normal temperatures and lack of precipitation.

The Bully Creek watershed will produce a short water supply this year.

Storage in Willow Creek Reservoir was reported as "well up" but it is not known if supplies will be sufficient.

The 11,160 square miles of watershed in the Owyhee Basin is in poor shape with a snow-cover only 59 percent average and 77 percent of last year. Soils are poorly wetted and the low snow is all gone.

The Owyhee Project, however, will have adequate water because of storage facilities. Present storage is 533,680 acre feet in Owyhee Reservoir and the 10-year average storage at this date is 566,000 acre feet.

Net inflow to Owyhee Reservoir is forecast at 240,000 acre feet for the April-September period. This inflow will be only 57 percent of the 10-year average. A total of 200,000 acre feet should be measured as inflow in the next four months.

Jordan Valley lands served from Antelope Reservoir have a much brighter picture with reservoir storage now at the 28,000 acre foot mark. Water content of snow at South Mountain snow course is 9.0 inches compared with 9.8 inches a year ago. Good May or June rains are needed to make this picture complete for adequate supplies.

Flow of McDermitt and Tenmile Creeks in Upper Quinn River will fall considerably short of average. Sufficient water for one irrigation is all that can be expected.

#### Southcentral Oregon

Adequate water supplies seem assured for irrigated lands of Lake County with snow-cover well above average and watershed soils well wetted or saturated.

Lands in Silver Lake Valley should have abundant water this year with present water content of the snow at the Silver Creek snow course 6.2 inches compared with an average of 1.0 inch and with none a year ago. Thompson Valley reservoir has been damaged by fire and will not store the full amount of 17,400 acre feet. Silver Lake will probably receive more water this year than last.



The Christmas Lake and Benjamin Lake areas are reported to be in well wetted condition for this season.

Summer Lake Basin is well off with saturated soils and snow-cover on the Rim containing 25.3 inches of water compared to 22.8 inches last year and an average of 17.9 inches. The lake level is very high and may possibly go higher.

Chewaucan River near Paisley is forecast at 100,000 acre feet or 145 percent of the 10-year average of 68,800 acre feet.

Albert Lake reached an all time high stage last July (highest recorded level since 1917). Outlook is for an even higher stage this season with the Chewaucan River forecast at 145 percent average. Recovery of this and other southcentral Oregon lakes is indicative of the increased ground water supplies.

Willow and Crooked Creeks will flow above average amounts this season.

Lands in Goose Lake Basin are saturated at this time and can expect good runoff from the above average snow-cover.

Thomas and Cottonwood Creeks in the north end have already run large amounts of water and will have good flows for some time yet. Cottonwood Reservoir had only 1,300 acre feet of storage but can easily be filled.

Crane Creek and Dry Creek and other lower valley streams will flow better than average supplies this season.

Drew Creek and Reservoir will produce an April-September flow of about 31,000 acre feet or 155 percent average. The reservoir has 56,400 acre feet in storage and is spilling to make room for inflow yet to come.

Warner Valley Lands will have adequate water supplies this year with considerable water expected to flow into Blue-joint Lake at the north end of the valley.

Honey Creek near Plush is forecast to flow 14,600 acre feet or 99 percent of the 10-year average for April-June.

Deep Creek above Adel is forecast to discharge 65,000 acre feet April through June. This discharge will be 98 percent average.

Twenty-mile Creek near Adel is forecast at 16,000 acre feet or 99 percent average for April-June.

Although snow is mostly lacking in the Hart Mountain Refuge the well wetted soils will benefit by the high area snow and supplies should be adequate. Flow of Rock Creek will be much better than last year.

Guano Valley lands are short on snow but the outlook is considerably better than last year with most small water holes and reservoirs full already.



Southern Oregon

Satisfactory to abundant water supplies are indicated for the Southern Oregon area with soils well wetted and a snow-cover well above average.

Klamath Basin snow-cover is 109 percent average and the series of good water years has caused a heavy replenishment of the ground water supplies.

Sprague River near Chiloquin is forecast to discharge 310,000 acre feet April through September or 133 percent average.

Williamson River below Sprague River is expected to produce 492,000 acre feet in the next six months. This flow will be 130 percent of the 10-year average. The first four months should bring a total of 425,000 acre feet.

Net inflow to Upper Klamath Lake is forecast at 680,000 acre feet for April-September or 140 percent average. The April-July inflow is set at 560,000 acre feet or 144 percent average.

Snow-cover in the Clear Lake-Gerber area is 122 percent average and mountain soils are well wetted.

Inflow to Gerber Reservoir is forecast at 19,000 acre feet for April-September compared with 18,800 acre feet for the 10-year average. Present storage in Gerber is 73,110 acre feet which is well above the 10-year average (1942-51) of 44,300 acre feet.

Inflow to Clear Lake Reservoir is forecast at 37,000 acre feet for the next six months compared with 40,700 acre feet for the average. Present storage is 319,800 acre feet and well above the 10-year average of 237,000 acre feet.

Small reservoirs and stock ponds throughout the Klamath Basin are reported full at this time.

Rogue River Basin snow-cover is 114 percent average with mountain and valley soils well saturated. Adequate water supplies will be experienced throughout the area.

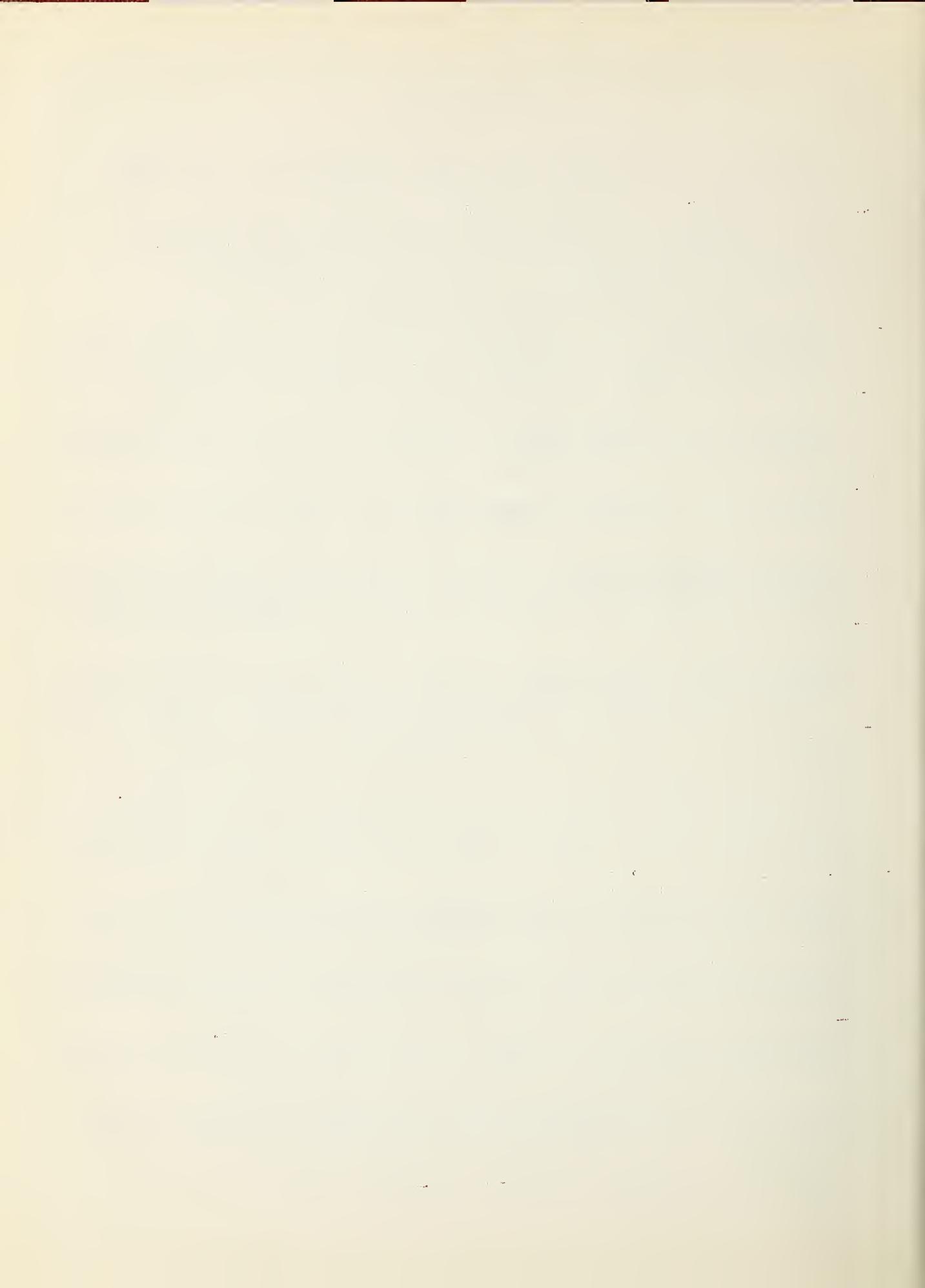
Discharge of Rogue River above Prospect is forecast at 357,000 acre feet April through September and 308,000 of this will be measured before August 1.

Rogue River, Middle Fork will discharge 76,000 acre feet compared with the average of 76,100 acre feet. The next four months will produce 60,000 acre feet.

Rogue River, South Fork is forecast at 80,000 acre feet for April-September or 100 percent average.

Discharge of the main Rogue River below South Fork is forecast at 730,000 acre feet or 107 percent average. April through July will bring 610,000 acre feet.

Rogue River at Raygold is forecast to discharge 990,000 acre feet April



through September and 850,000 April through July.

Rogue River at Grants Pass is expected to flow 950,000 acre feet or 108 percent of the 10-year average for April through September.

Grants Pass Irrigation District will have adequate water supplies with no probability that the river will fall below the 870 c.f.s. mark where alteration of pumping begins.

Irrigated lands of Bear Creek Valley will have satisfactory water supplies this year with water content of the snow averaging 111 percent normal.

Talent Irrigation District begins the season with Emigrant Reservoir full and a storage of 12,500 acre feet in Hyatt Reservoir on April 1. Hyatt Lake will probably fill by April 15th with the total April-September inflow forecast at 6,400 acre feet or 112 percent average.

McDonald Creek Canal should make continuous delivery of water throughout the season this year.

Medford and Rogue River Valley Irrigation Districts have adequate water supplies ahead for the 1954 season.

Fourmile Lake storage is over 15,000 acre feet and inflow for April through September is forecast at 7,000 acre feet.

Fish Lake reservoir storage is 7,000 acre feet and inflow as measured at Little Butte Creek below Fish Lake is forecast at 15,300 acre feet for the next six months.

The Eagle Point Irrigation District will have adequate water supplies this season. The City of Medford has a full reservoir on Willow Creek to supplement flow of Big Butte spring in late season.

The Applegate country has a very heavy snow-cover averaging 135 percent normal and adequate water supplies are indicated for 1954.

Flow of Applegate River at Ruch is forecast at 198,000 acre feet or 177 percent of the 10-year average.

Snow-cover on the Illinois Valley watershed is 122 percent average and adequate supplies are in sight for the season.

Discharge of the Illinois River at Kerby is set for 213,000 acre feet or 120 percent of the April-September average.

Deer Creek, Sucker Creek and Althouse Creeks should have above average flows this season.

Evans Creek, Grave Creek and Jump-off Joe Creek should have adequate water supplies with flows slightly above average.

Snow-cover on the Umpqua Basin is 125 percent of average.



Discharge of Clearwater River above Trap Creek is forecast at 65,000 acre feet or 100 percent average.

Flow of North Umpqua below Lake Creek is set at 170,000 acre feet for April-September, exactly equal to average.

Flow of North Umpqua at Toketee Falls is forecast for 398,000 acre feet for the next six months or 101 percent average.

Willamette Valley Streams

(See page 5 for individual forecasts.)

ERRATA

Page 7 - Silver Lake Basin snow-cover as percent of average should read 620 percent (not 62).



OREGON SNOW SURVEYS - ABOUT APRIL 1, 1954

DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	SNOW COVER MEASUREMENTS							
			Date of Survey	Snow Depth (In.)	Water Content (In.)	1954			Past Record	
						1953	1952	Avg.	Years of Record	

U P P E R   C O L U M B I A   D R A I N A G E  
LOWER SNAKE IN OREGONOWYHEE RIVER

*Fish Creek	952	7900	3/24	68.5	22.4	22.1	43.2	25.8	14
*Bear Creek	Nev.1	7800	3/29	47.5	12.1 <sup>a</sup>	19.9	33.1	21.7	11
*Granit Peak	Nev.4	7800	3/31	18.7	6.3	9.5	--	11.4	13
Upper Jack Creek	Nev.1 <sup>b</sup>	7250	3/25	25.7	6.4	11.4	20.8	11.4	13
*Midas	Nev.5	7200	Report Delayed			0.0	--	2.0	12
*Upper Buckskin	Nev.2	7200	3/31	10.3	3.2	5.1	--	10.4	17
*76 Creek	Nev.4	7100	3/23	31.1	9.4	15.5	--	13.1	5
*Silvies	951	6900	3/24	36.7	12.5	10.0	26.5	14.3	16
*Fox Creek	Nev.2	6800	3/29	18.3	5.9 <sup>a</sup>	8.4	19.5	9.2	17
Lower Jack Creek	Nev.9	6800	3/25	9.0	1.4	0.0	10.3	4.0	19
Rodeo Flat	Nev.8	6800	3/24	13.4	3.9	10.2	22.8	11.0	13
Big Bend	Nev.6	6700	3/23	17.9	4.9	9.7	19.1	10.0	26
Fry Canyon	Nev.7	6700	3/24	12.2	3.0	9.7	20.3	10.7	13
*Lower Buckskin	Nev.1	6700	3/30	15.0	4.8	2.1	--	8.1	12
*Martin Creek	Nev.3	6700	3/30	14.9	4.9	4.4	--	7.9	12
Gold Creek	Nev.5	6600	3/23	7.2	2.0	6.2	12.6	6.9	14
*Disaster Peak	Nev.6	6500	Report Delayed			10.1	36.2	15.8	5
Silver City	Idaho 12	6400	4/4	33.0	13.0	17.5	31.5	15.3	9
South Mtn. #2	Idaho 13	6340	3/30	24.0	9.0	9.8	--	11.4	13
Taylor Canyon	Nev.12	6200	3/25	13.8	3.6	0.0	15.4	3.9	13
*Tremewan Ranch	Nev.11	5700	3/24	T	T	0.0	6.7	1.0	12

MALHEUR RIVER

*Barney Creek	143	5950	3/28	22.3	6.0	8.8	13.0	9.3	9
Blue Mtn. Springs	133	5900	3/29	41.3	15.1	18.8	23.1	15.4	24
Crane Prairie	137	5375	3/30	17.8	6.4	11.7	16.1	9.0	16
Lake Creek	136	5120	3/29	21.5	7.5	14.1	15.9	10.4	16
Rock Spring	134	5100	4/1 <sup>c</sup>	3.9	1.4 <sup>a</sup>	5.3	9.1	5.0	18
Stinking Water	135	4800	4/1	0.0	0.0	0.0	9.2	1.2	13

BURNT RIVER

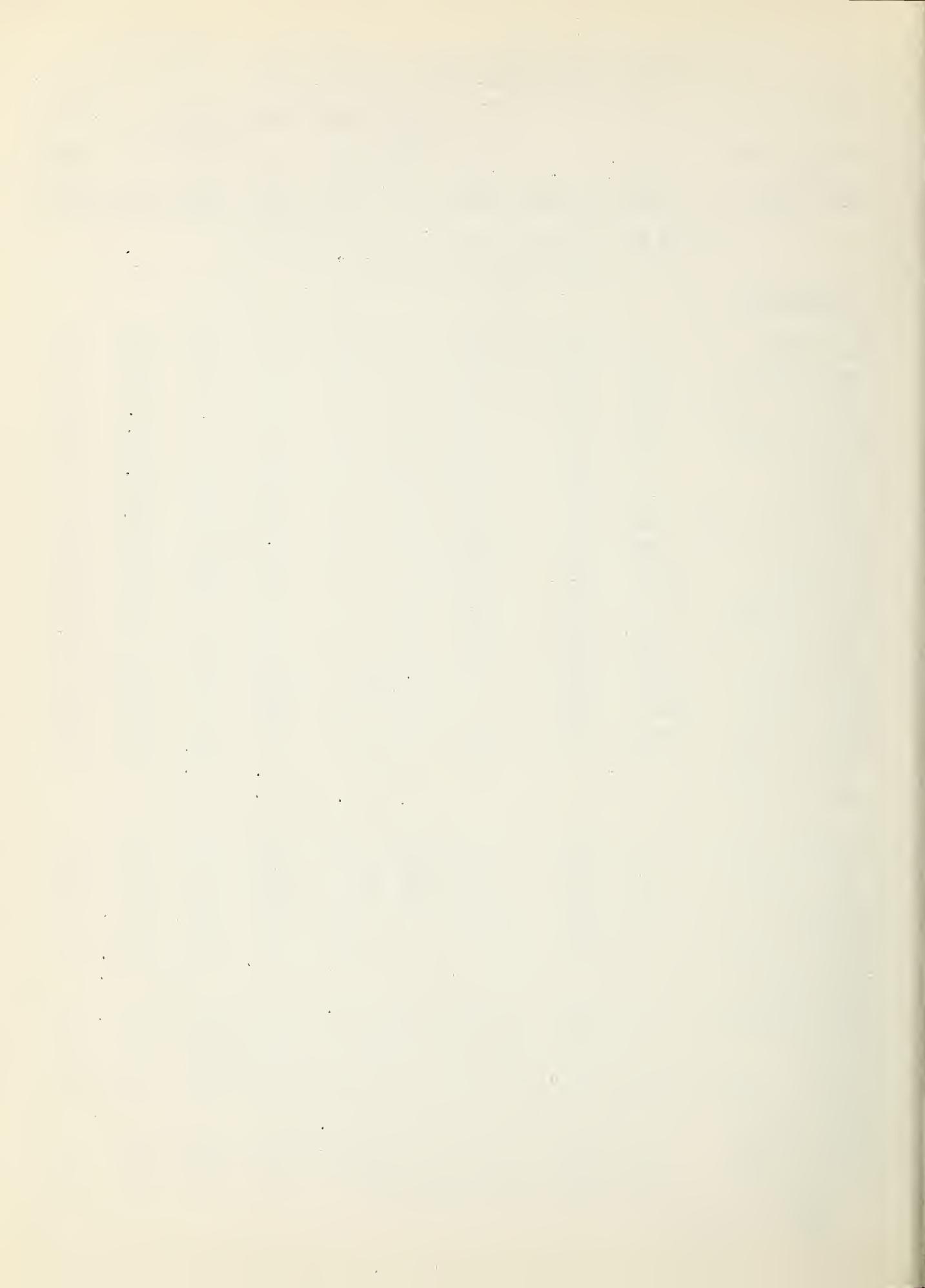
Barney Creek	143	5950	3/28	22.3	6.0	8.8	13.0	9.3	9
Dooley Mountain	156	5430	3/25	14.7	4.4	11.6	14.8	9.2	15
*Gold Center	249	5340	3/30	31.8	12.5	15.5	17.7	12.2	15
Tipton	142	5100	3/31	21.2	7.2	11.3	13.0	9.8	19
Blue Mtn. Summit	141	5098	3/30	15.5	5.3	10.0	13.2	7.8	19

POWDER RIVER

Anthony Lake	155	7125	3/25	75.2	26.7 <sup>b</sup>	30.7	31.5	27.9	18
Goodrich Lake	157	6775	3/31	91.3	38.1 <sup>b</sup>	48.0	51.0	42.5	6
Summit Springs	184	6000	3/26	49.7	16.6	18.6	24.2	21.4	17

\*Not located directly on this drainage area.

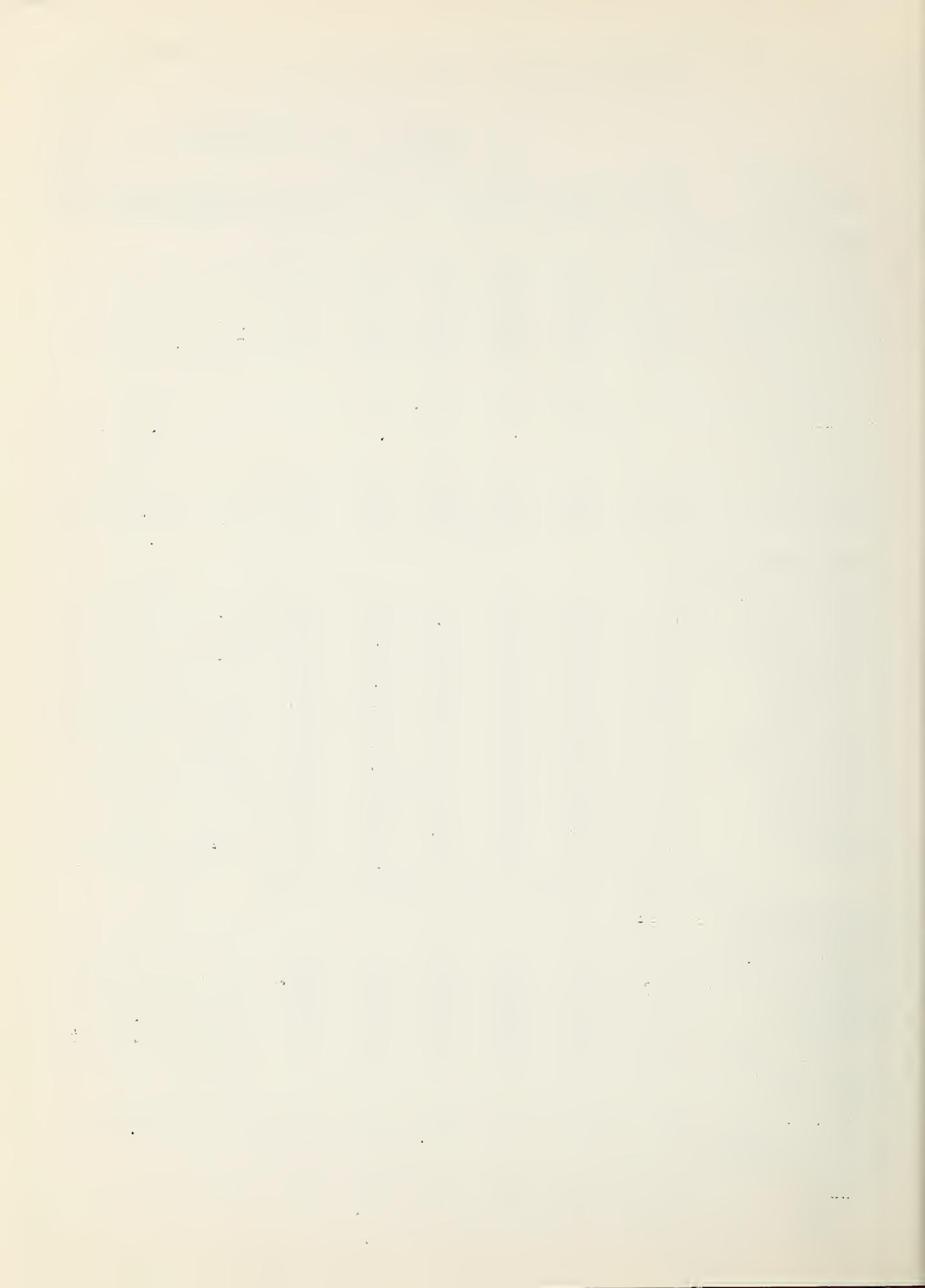
<sup>a</sup>Telegraphic<sup>b</sup>Partly estimated<sup>c</sup>Date estimated



OREGON SNOW SURVEYS - ABOUT APRIL 1, 1954

DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	SNOW COVER MEASUREMENTS							
			Date of Survey	1954		Past Record			Years of Record	
				Snow Depth (In.)	Water Content (In.)	Water Content 1953	1952	Avg.		
<u>POWDER RIVER (Cont'd)</u>										
Bourne	154	5800	3/29	40.2	15.8	20.6	20.1	16.0	18	
Taylor Green	185	5740	4/1	35.8	12.8 <sup>a</sup>	20.5	24.4	17.0	16	
Dooley Mountain	156	5430	3/25	14.7	4.4	11.6	14.8	9.2	15	
Eilertson Meadows	151B	5400	3/28	30.8	10.2	15.4	17.0	12.1	16	
*Gold Center	249	5340	3/30	31.8	12.5	15.5	17.7	12.2	15	
<u>PINE CREEK</u>										
Schneider Meadows	161	5400	3/30	66.4	27.0	39.3	45.4	30.5	16	
<u>IMNAHA RIVER</u>										
*Aneroid Lake No. 1	183	7480	3/29	110.1	39.0	48.0 <sup>b</sup>	45.7	36.8	19	
*Aneroid Lake No. 2	183A	7000	3/29	85.7	30.2	36.1	37.5	30.6	12	
Coverdale	171	4250	Not Measured			--	--	9.6	4	
<u>GRANDE RONDE RIVER</u>										
Aneroid Lake No. 1	183	7480	3/29	110.1	39.0	48.0 <sup>b</sup>	45.7	36.8	19	
Anthony Lake	155	7125	3/25	75.2	26.7	30.7	31.5	27.9	18	
Aneroid Lake No. 2	183A	7000	3/29	85.7	30.2	36.1	37.5	30.6	12	
Summit Springs	184	6000	3/26	49.7	16.6	18.6	24.2	21.4	17	
Camp Carson	187	5970	3/28	31.2	11.0	11.1	--	10.2	14	
Moss Spring	186A	5850	3/31	60.6	22.4 <sup>a</sup>	27.2	28.1	25.2	16	
Taylor Green	185	5740	4/1	35.8	12.8 <sup>a</sup>	20.5	24.4	17.0	16	
Beaver Reservoir	188	5340	3/29	32.5	10.6	12.9	12.8	12.1	15	
Tollgate	212	5070	3/29	61.5	25.3	30.0	35.6	27.9	23	
*Lucky Strike	223	5050	3/30	35.6	11.3	19.5	13.6	13.5	15	
County Line	189	4800	3/30	8.4	3.3	7.6	7.0	7.3	2	
Schoolmarm	248	4775	3/30	3.7	1.5	4.6	5.6	3.7	7	
Meacham	221	4300	3/29	11.2	3.3	8.9	9.9	8.6	25	
<u>LOWER COLUMBIA DRAINAGE</u>										
<u>UMATILLA RIVER</u>										
Arbuckle Mountain	241	5400	3/31	23.3	8.9	17.1	14.4	10.8	25	
Tollgate	212	5070	3/29	61.5	25.3	30.0	35.6	27.9	23	
Lucky Strike	223	5050	3/30	35.6	11.3	19.5	13.6	13.5	15	
Meacham	221	4300	3/29	11.2	3.3	8.9	9.9	8.6	25	
Emigrant Springs	222	3925	3/29	1.3	0.4	2.8	6.7	5.7	25	
<u>WILLOW CREEK</u>										
Arbuckle Mountain	241	5400	3/31	23.3	8.9	17.1	14.4	10.8	25	
<u>WALLA WALLA RIVER</u>										
Tollgate	212	5070	3/29	61.5	25.3	30.0	35.6	27.9	23	

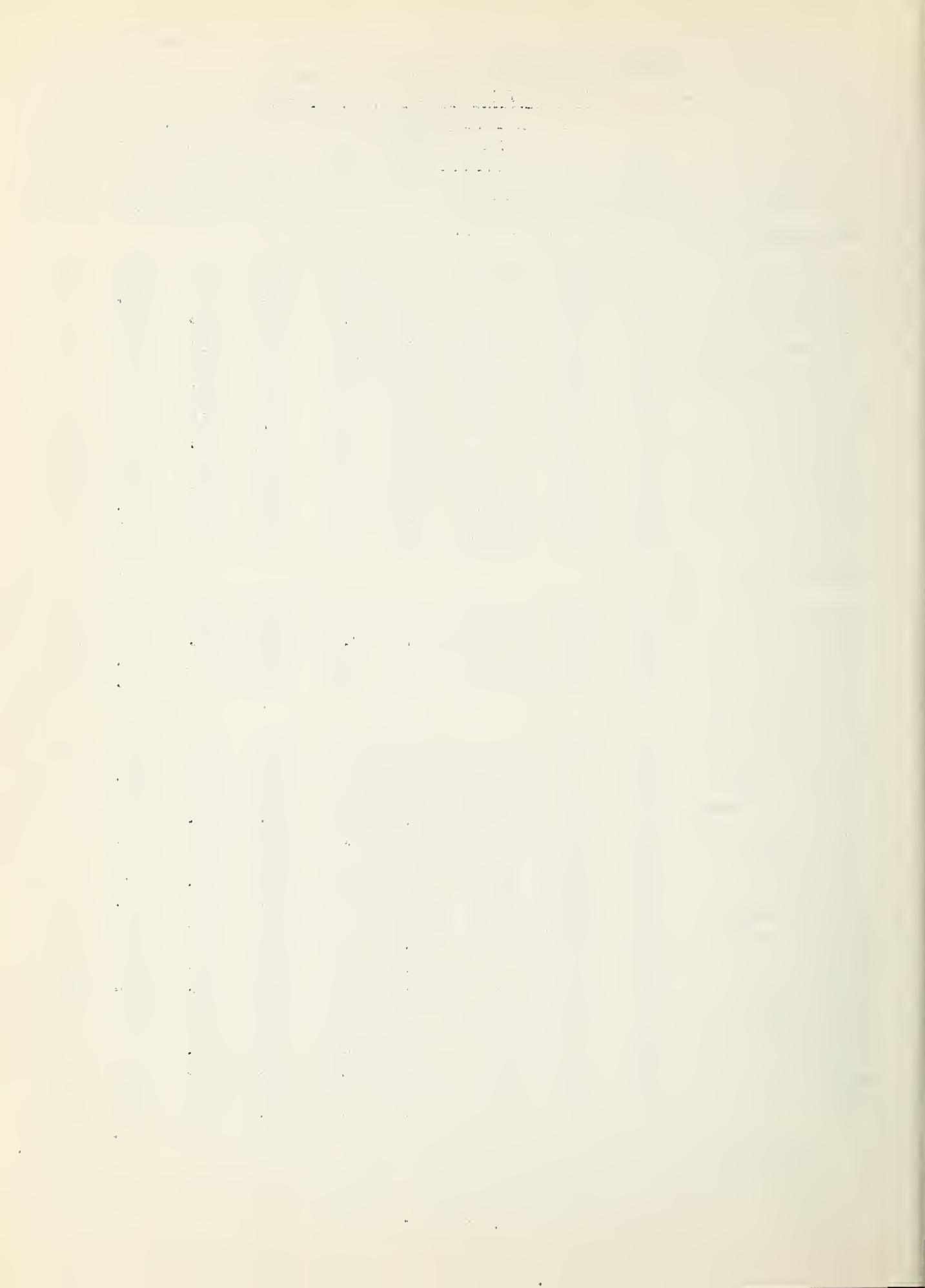
<sup>a</sup>Not located directly on this drainage area.<sup>b</sup>Telegraphic.<sup>c</sup>Partly estimated.



OREGON SNO. SURVEYS - ABOUT APRIL 1, 1954

DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	SNOW COVER MEASUREMENTS						Years of Avg. Record	
			1954		Past Record		Water Content (In.)			
			Date of Survey	Snow Depth (In.)	Water Content (In.)	1953	1952			
<u>JOHN DAY RIVER</u>										
*Anthony Lake	155	7125	3/25	75.2	26.7	30.7	31.5	27.9	18	
Dixie Springs	244	6650	3/31	59.6	22.8	28.3	31.8	24.1	18	
*Snow Mountain	965	6300	3/23	36.0	12.3	16.2	21.5	15.2	10	
Olive Lake	245	6000	3/31	61.2	21.3	23.5	27.7	20.0	18	
Blue Mtn. Springs	133	5900	3/29	41.3	15.1	18.8	23.1	15.4	24	
Arbuckle Mountain	241	5400	3/31	23.3	8.9	17.1	14.4	10.8	25	
Gold Center	249	5340	3/30	31.8	12.5	15.5	17.7	12.2	15	
*Izee Summit	964	5293	3/31	18.1	6.2	8.7	13.8	7.7	18	
Starr Ridge	247B	5156	3/31	10.1	3.4	5.4	10.5	4.7	18	
Tipton	142	5100	3/31	21.2	7.2	11.3	13.0	9.8	19	
Blue Mtn. Summit	141	5098	3/30	15.5	5.3	10.0	13.2	7.8	19	
*Lucky Strike	223	5050	3/30	35.6	11.3	19.5	13.6	13.5	15	
Beech Creek Summit	246A	4800	3/29	6.2	2.5	6.8	7.4	5.1	17	
Schoolmarm	248	4775	3/30	3.7	1.5	4.6	5.6	3.7	7	
<u>CROOKED RIVER</u>										
*Snow Mountain	965	6300	3/23	36.0	12.3	16.2	21.5	15.2	10	
Derr	343	5670	3/29	28.7	9.2	12.8 <sup>a</sup>	15.1	10.7	17	
Ochoco Meadows	341	5200	3/30	24.4	8.1	12.2	17.5	9.7	25	
Marks Creek	344	4540	3/29	4.2	1.6	0.7 <sup>a</sup>	6.9	3.1	16	
<u>DESCHUTES RIVER</u>										
New Dutchman Flat	324A	6400	3/20	133.3	60.2	64.8	77.1	52.7	17	
Windigo Pass <sup>1</sup>	744	5800	Report Delayed		54.0	62.1	55.1	6		
Charlton Lake	327	5750	3/30	94.9	33.3	34.7	49.6	28.6	13	
Three Creek Meadows	331	5600	3/21	58.6	24.3	22.6	30.5	20.8	25	
Willamette Pass	323	5600	Report Delayed		50.0	64.6	48.7	7		
Irish-Taylor	329	5500	4/1	107.4	42.4	46.9	64.0	53.2	4	
*Waldo Lake	521A	5500	3/29	93.9	33.4	34.5	50.1	29.7	15	
Tangent	3210	5400	3/20	56.5	26.0	27.6	37.0	32.3	2	
Cascade Summit	321	4880	3/28	96.4	37.8	34.8	54.5	31.7	24	
New Crescent Lake	325A	4800	4/5	41.2	17.4	20.3	26.6	23.4	2	
*Chemult	834	4760	3/31	27.4	11.6	16.3	21.4	10.0	16	
Crescent Lake	325	4760	4/5	27.8	13.3	14.5	25.7	10.5	19	
Hogg Pass	351	4755	3/27	115.2	50.3	49.8	60.8	44.2	15	
Black Pine Spg.	333	4600	3/21	9.7	2.7	1.2	9.5	5.4	2	
Caldwell Ranch	326	4400	4/1	24.5	10.6	14.7	18.2	9.1	16	
Hungry Flat	3211	4400	3/20	19.0	8.0	3.1	--	3.1	1	
*Brooks Meadows	431	4300	3/25	38.5	16.9	10.5	17.2	11.3	21	
Clear Lake <sup>2</sup>	361	3500	3/25	34.0	15.4	11.2	17.6	14.1	22	

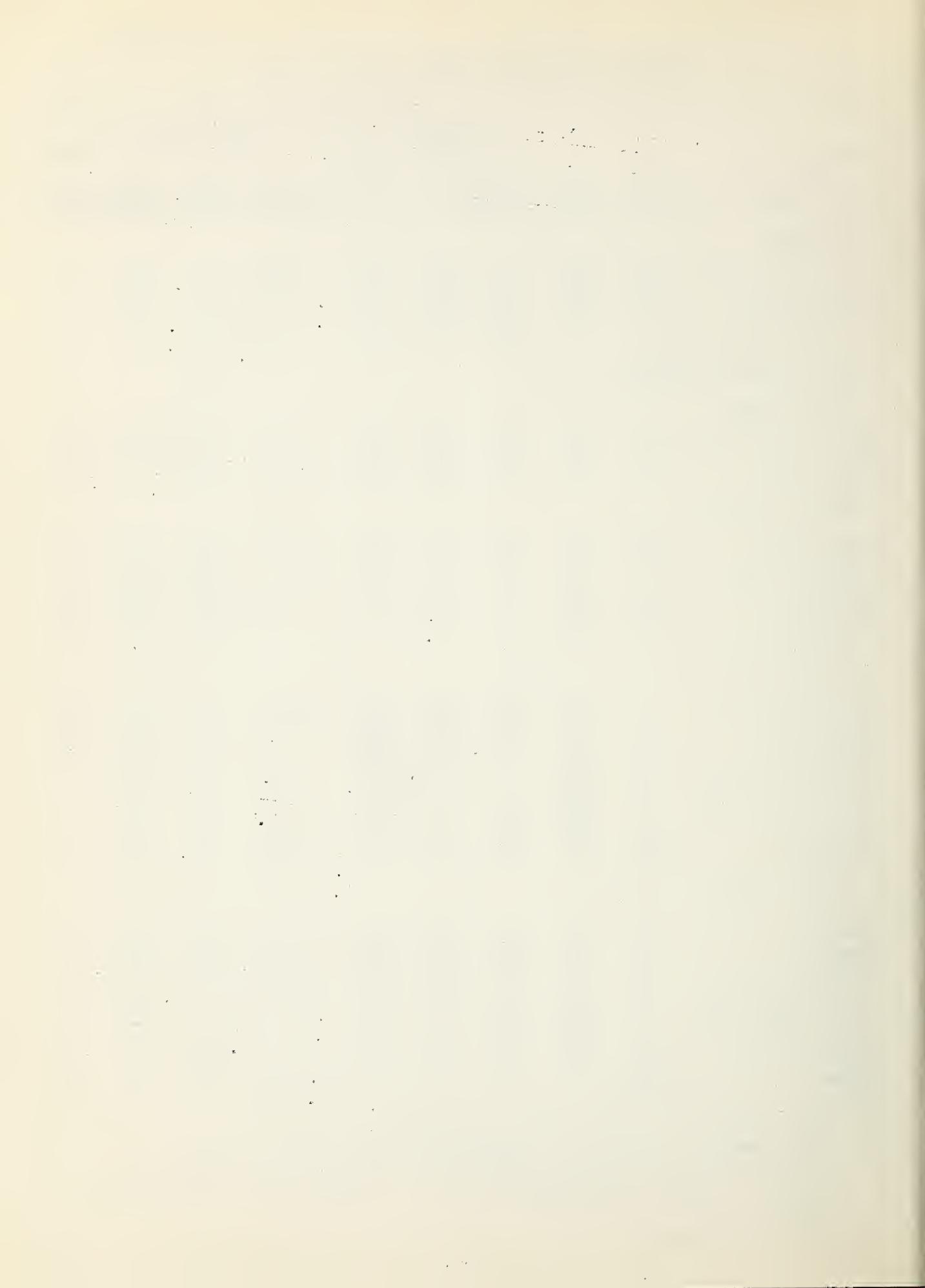
<sup>\*</sup>Not located directly on this drainage area.<sup>a</sup>Telegraphic<sup>1</sup>Course revised to 9 samples at 100 ft. Earlier records recomputed and available upon request.<sup>2</sup>Course revised to 11 samples at 100 ft. Earlier records recomputed and available upon request.



## OREGON SNOW SURVEYS - ABOUT APRIL 1, 1954

DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	SNOW COVER MEASUREMENTS						Years of Avg. Record	
			Date of Survey	1954		Past Record				
				Snow Depth (In.)	Water Content (In.)	Water Content (In.)	1953	1952		
<u>HOOD RIVER</u>										
Tilly Jane-Mt.Hood	432	6000	3/21	112.3	52.4	44.4	60.0 <sup>b</sup>	53.2	6	
Red Hill	434	4400	3/28	128.9	57.3 <sup>b</sup>	41.9	59.3	62.2	6	
Brooks Meadows	431	4300	3/25	38.5	16.9	10.5	17.2	11.3	21	
Greenpoint Reservoir	433	3400	3/28	53.3	25.4	9.0	22.1	19.5	3	
<u>WILLAMETTE VALLEY STREAMS</u>										
<u>SANDY RIVER<sup>1</sup></u>										
Phlox Point-Mt.Hood	452	5600	3/25	132.1	65.4	71.6	76.2	62.5	16	
Still Creek	451	3700	3/25	65.0	28.9	24.0	32.9	24.1	17	
*Clear Lake <sup>2</sup>	361	3500	3/25	34.0	15.4	11.2	17.6	14.1	22	
<u>CLACKAMAS RIVER</u>										
*Clear Lake <sup>2</sup>	361	3500	3/25	34.0	15.4	11.2	17.6	14.1	22	
Peavine Ridge	591	3500	4/4	56.2	24.8	19.5	27.8	20.1	17	
Clackamas Lake	592	3400	3/29	44.8	17.9	12.9	16.5	15.4	13	
Big Bottom	594	2118	4/4	21.2	9.7	2.6	11.0	8.5	3	
Lake Harriet	595	2045	4/4	0.0	0.0	0.0	1.7	0.6	3	
<u>SANTIAM RIVERS</u>										
Hogg Pass	351	4755	3/27	115.2	50.3	49.8	60.8	44.2	15	
Santiam Junction	552	3990	3/27	69.8	27.3	29.6	43.2	25.7	13	
Marion Forks	553	2730	3/27	42.7	17.8	14.5	24.7	13.7	13	
Breitenbush	551	2325	Not Measured		--	9.7	4.5	9		
Whitewater Bridge	554	2175	3/27	1.5	T	0.0	10.0	9.7	4	
Detroit (new town)	555	1500+	3/27	0.0	0.0	0.0	0.0	0.0	3	
Detroit Dam	556	1580	3/27	0.0	0.0	0.0	0.0	0.0	3	
Mill City	557	826	3/27	0.0	0.0	0.0	0.0	0.0	3	
Snow Line: about 1700 feet										
<u>MCKENZIE RIVER</u>										
McKenzie	531	4800	4/2	110.4	46.8	55.1	65.1 <sup>b</sup>	42.7	13	
Hogg Pass	351	4755	3/27	115.2	50.3	49.8	60.8	44.2	15	
Santiam Junction	552	3990	3/27	69.8	27.3	29.6	43.2	25.7	13	
Dead Horse Grade	532	3800	4/2	51.5	22.8	20.1	35.7	29.3	4	
White Branch Slide	533	2800	4/2	0.0	0.0	0.0	15.0	7.5	4	
Lost Creek Ranch	534	1956	4/2	0.0	0.0	0.0	--	0.0	2	
McKenzie Bridge	535	1372	4/2	0.0	0.0	0.0	0.0	0.0	3	
Vidae	536	800	4/2	0.0	0.0	0.0	0.0	0.0	3	
Snow Line: about 3000 feet.										

<sup>a</sup>Not located directly on this drainage area.<sup>b</sup>Not strictly a part of the Willamette Drainage; these surveys are indicative of west slope conditions.<sup>2</sup>Course revised to 11 samples at 100 ft. Earlier records recomputed and are available upon request.<sup>a</sup>Telegraphic.<sup>b</sup>Partly estimated.



OREGON SNOW SURVEYS - ABOUT APRIL 1, 1954

DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	SNOW COVER MEASUREMENTS						Years of Water Content (In.) 1953 1952 Avg. Record	
			1954			Past Record				
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Water Content (In.)	Water Content (In.)	Water Content (In.)		
<u>WILLAMETTE VALLEY STREAMS (Cont'd)</u>										

## MIDDLE FORK WILLAMETTE RIVER

*Charlton Lake	327	5750	3/30	94.9	33.3	34.7	49.6	28.6	13
Willamette Pass	323	5600	Report	Delayed		50.0	64.6	48.7	7
Waldo Lake	521A	5500	3/29	93.9	33.4	34.5	50.1	29.7	15
Cascade Summit	321	4880	3/28	96.4	37.8	34.8	54.5	31.7	24
Champion	522	4500	4/1	84.1	37.0	31.9	59.2	28.9	15
Salt Creek Falls	523	4000	3/28	53.2	19.2	20.4	30.8	27.2	4
Railroad Overpass	524	2750	3/28	T	T	0.0	5.6	4.0	4
McCredie Spring	525	2120	3/28	0.0	0.0	0.0	0.0	0.0	4
Oakridge	526	1310	3/28	0.0	0.0	0.0	0.0	0.0	4
Meridian Dam	527	750	3/28	0.0	0.0	0.0	0.0	0.0	4

Snow Line: about 2800 feet.

## COAST FORK WILLAMETTE RIVER (Row River)

Champion	522	4500	4/1	84.1	37.0	31.9	59.2	28.9	15
Golden Curry Creek	528	3136	4/1	0.0	0.0	5.4	20.6	12.9	4
Weaver Creek	529	2440	4/1	0.0	0.0	0.0	10.3	4.7	3
Lund Park	5210	1740	4/1	0.0	0.0	0.0	0.0	0.0	4
Laying Creek R.S.	5211	1200	4/1	0.0	0.0	0.0	0.0	0.0	4

Snow Line: about 3500 feet.

## MARY'S PEAK

Mary's Peak	541	3620	4/4	19.6	8.3	13.3	25.4	11.7	13
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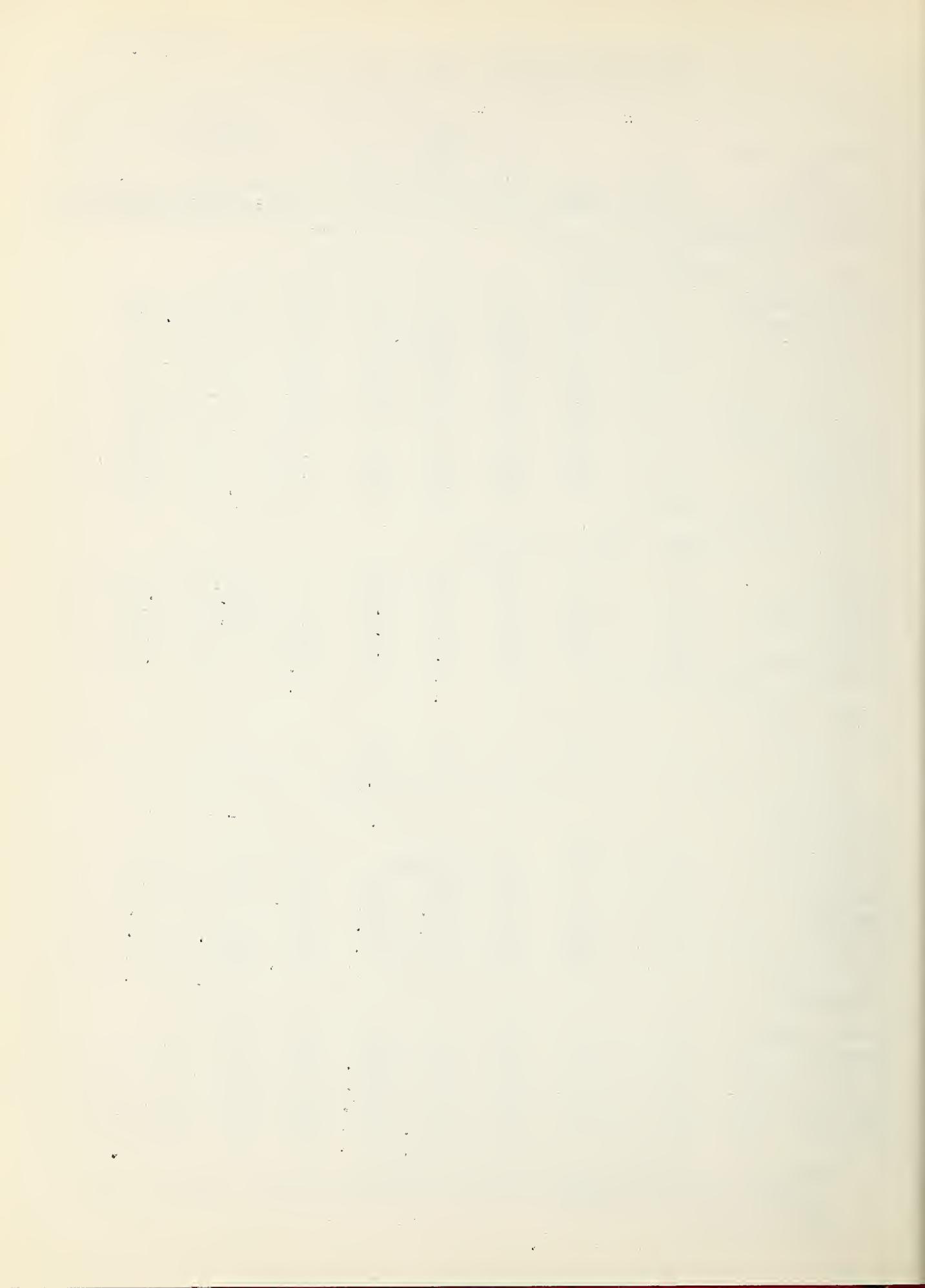
OREGON AND CALIFORNIA COAST DRAINAGEUMPQUA RIVER

Windigo Pass <sup>1</sup>	744	5800	Report	Delayed		54.0	62.1	55.1	6
Diamond Lake	743	5315	3/31	65.7	28.0	32.5	40.7	20.4	25
Whaleback	7217	5140	4/2	89.1	39.9	42.8	58.1	36.0	16
Champion	522	4500	4/1	84.1	37.0	31.9	59.2	28.9	15
N.Umpqua nr.Lake Cr.	742	4215	3/31	44.9	18.4 <sup>a</sup>	20.3	27.7	13.7	16
Trap Creek	741	3800	Not Measured			--	24.0	11.8	13

ROGUE RIVER

Wagner Butte	7213	6900	4/1	55.9	23.4	19.9	30.0	17.7	19
Seven Lakes No. 1	7211	6800	4/4	153.0	65.9	70.2	--	57.6	17
Big Red Mountain	729	6500	3/29	102.3	42.6	42.8	50.1	30.1	18
Little Red Mtn.	7210	6500	3/30	74.7	32.9	34.6	39.2	23.5	18
*Park Headquarters	838	6450	3/31	145.5	63.6	69.6	90.5	65.2	10
Scragg Mountain	7220	6200	3/25	74.2	37.6 <sup>b</sup>	39.5	62.3	30.1	12

<sup>a</sup>Not located directly on this drainage area.<sup>b</sup>Course revised to 9 samples at 100 ft. Earlier records recomputed and available upon request.<sup>a</sup>Telegraphic.<sup>b</sup>Partly estimated.



OREGON SNOW SURVEYS - ABOUT APRIL 1, 1954

DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	SNOW COVER MEASUREMENTS					Past Record		
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Years		1953	1952	Years
						1954	1953			
<u>ROGUE RIVER - (Cont'd)</u>										
Seven Lakes No. 2	7212	6200	4/4	104.1	45.1	48.2	--	42.8	17	
*Annie Spring	831	6018	3/31	115.6	47.8	56.5	77.3	44.6	21	
*Fourmile Lake	7223	6000	3/23	62.1	25.6	32.4	--	32.4	1	
Grayback Peak	727	6000	3/31	76.0	36.4	32.6	50.5	26.4	18	
Billie Cr. Divide	722	5300	3/23	54.4	20.3	24.6	--	22.4	23	
Whaleback	7217	5140	4/2	89.1	39.9	42.8	58.1	36.0	16	
Hobart Lake	7221	5010	3/29	18.4	8.9	6.2	9.3	6.3	6	
*Hyatt Prairie Res.	723	4900	3/31	27.3	12.4	12.2	17.5	9.2	21	
Fish Lake	725	4865	3/30	32.4	12.4	14.2	--	12.5	20	
Siskiyou Summit	728	4630	4/1	c	c	--	17.7	4.0	18	
Althouse	7216	4400	4/1	16.7	5.1	5.8	24.3	7.6	17	
Silver Burn	7219	3720	4/1	32.7	14.3	16.9	26.6	11.7	17	
South Fork Canal	7218	3500	4/1	0.0	0.0	0.0	7.4	1.4	17	
<u>KLAMATH LAKE BASIN</u>										
Summer Rim	841	7200	3/26	64.5	25.5	22.8	35.5	17.9	17	
Seven Lakes No. 1	7211	6800	4/4	153.0	65.9	70.2	--	57.6	17	
Park Headquarters	838	6450	3/31	145.5	63.6	69.6	90.5	65.2	10	
Seven Lakes No. 2	7212	6200	4/4	104.2	45.1	48.2	--	42.8	17	
Annie Spring	831	6018	3/31	115.6	47.8	56.5	77.3	44.6	21	
Fourmile Lake	7223	6000	3/23	62.1	25.6	32.4	--	32.4	1	
Strawberry	837	5600	4/2	17.8	6.7 <sup>a</sup>	6.8	18.2	6.7	13	
*Quartz Mtn.(COPCO)		5504	4/1	10.0	7.0 <sup>d</sup>	--	12.9	4.9	21	
Sun Mountain	836	5350	3/29	71.5	27.6	33.4	47.4	28.5	17	
*Quartz Mountain	811	5320	4/1	15.4	6.0 <sup>b</sup>	6.2	12.9	4.6	23	
Billie Creek Divide	722	5300	3/23	54.4	20.3	24.6	--	22.4	23	
Crowder Flat	Calif.	5200	Not	Measured		0.0	--	0.1	13	
Taylor Butte	842	5100	Not	Measured		6.7	14.4	4.1	17	
Lake of the Woods	835	4960	3/31	36.8	13.3	15.6	21.5	10.4	17	
Hyatt Prairie Res.	723	4900	3/31	27.3	12.4	12.2	17.5	9.2	21	
Gerber	839	4850	4/1	0.0	0.0	1.5	4.0	1.8	3	
Bly 101 Ranch(COPCO)		4800	3/31	0.0	0.0	0.0	0.8	0.1	25	
Chemult	834	4760	3/31	27.4	11.6	16.3	21.4	10.0	16	
Yamsey (COPCO)		4600	No	Report		0.0	5.9	0.7	23	
Kirk (COPCO)		4533	3/31	12.0	4.5	0.0	7.0	1.8	22	
Beatty (COPCO)		4300	3/31	0.0	0.0	0.0	0.0	T	26	
Crystal (COPCO)		4200	3/31	12.0	7.9	7.0	16.8	5.7	24	
Harriman Lodge (COPCO)		4200	3/31	T	T	0.0	8.8	1.1	25	
Chiloquin (COPCO)		4187	3/31	0.0	0.0	0.0	T	0.1	26	
Fort Klamath (COPCO)		4150	3/31	0.0	0.0	0.0	10.1	1.2	27	

\*Not located directly on this drainage area.

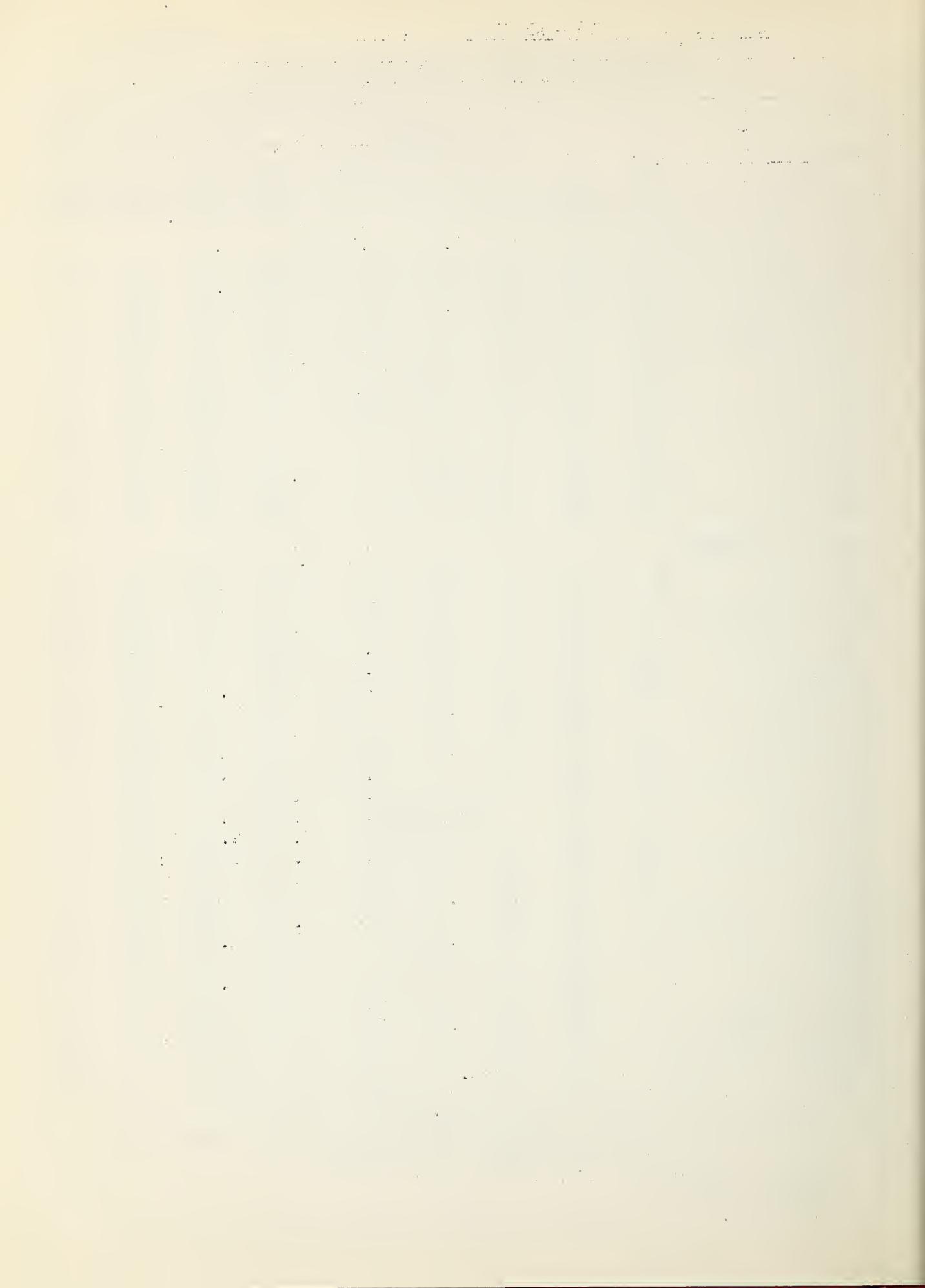
(COPCO) - Water content determined by melting a measured sample (The California Oregon Power Co.'s Station).

<sup>a</sup>Telegraphic.

<sup>b</sup>Partly estimated.

<sup>c</sup>No survey due to logging operation which has removed all snow from course.

<sup>d</sup>Survey Questioned.



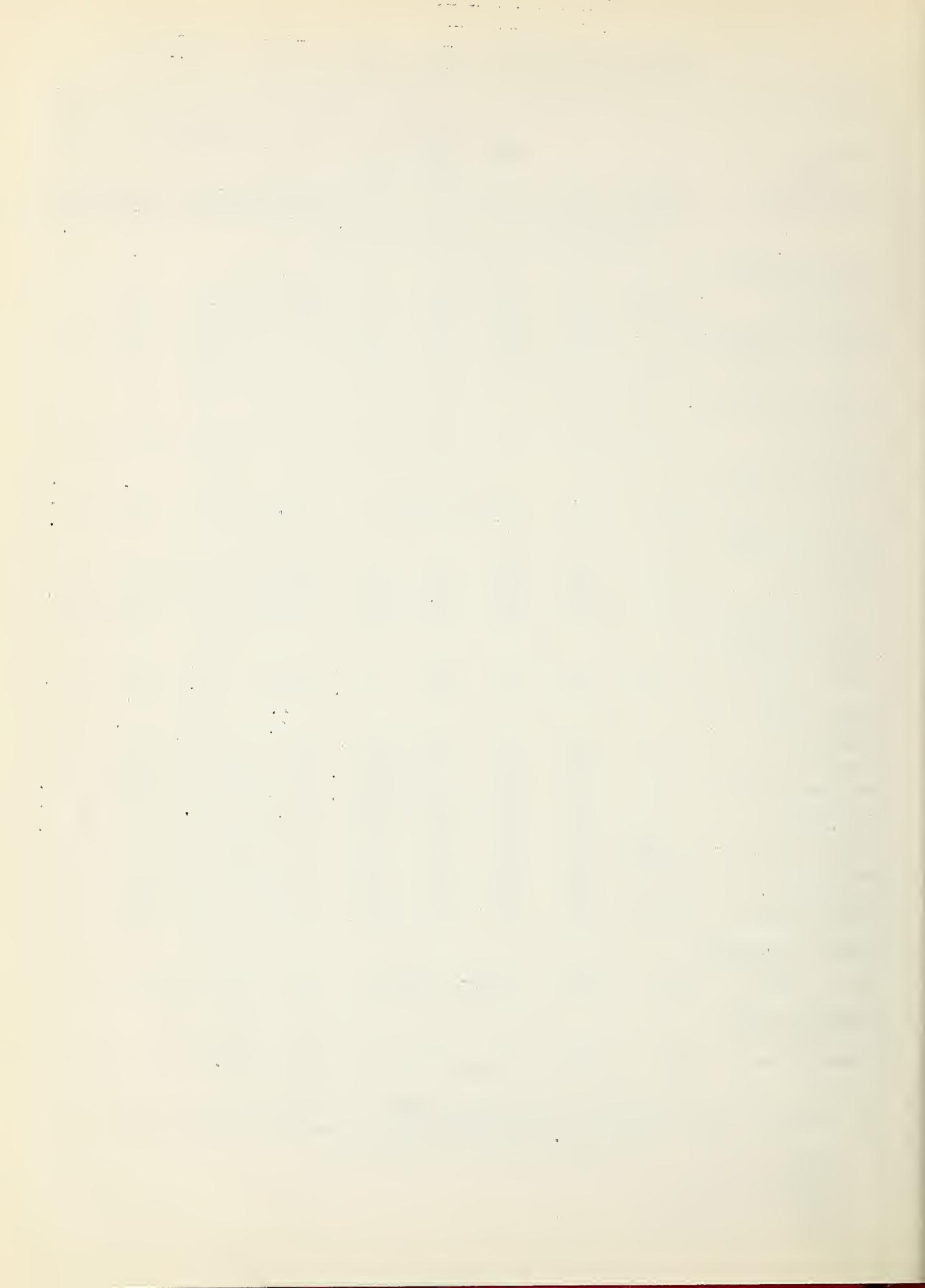
OREGON SNOW SURVEYS - ABOUT APRIL 1, 1954

DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	SNOW COVER MEASUREMENTS						Years 1953 1952 Avg. Record		
			Date of Survey	Snow Depth (In.)	Water Content (In.)	Past Record					
			1954	1953	1952	Avg.					
<u>I N T E R I O R   D R A I N A G E</u>											
<u>GOOSE LAKE BASIN</u>											
Camas Creek	911A	5720	3/30	31.1	11.2	11.7	22.1	10.9	15		
Strawberry	837	5600	4/2	17.8	6.7 <sup>a</sup>	6.8	18.2	6.7	13		
Quartz Mtn.(COPCO)		5504	4/1	10.0	7.0 <sup>d</sup>	—	12.9	4.9	21		
Quartz Mountain	811	5320	4/1	15.4	6.0 <sup>b</sup>	6.2	12.9	4.6	23		
<u>WARNER LAKE BASIN</u>											
*Camas Creek	911A	5720	3/30	31.1	11.2	11.7	22.1	10.9	15		
<u>GUANO LAKE BASIN</u>											
Bald Mountain	Nev.1	6720	Report Delayed			0.4	10.4	3.2	14		
<u>CHEWAUCAN RIVER</u>											
*Summer Rim	841	7200	3/26	64.5	25.5	22.8	35.5	17.9	17		
Mill Creek	922	6200	3/27	28.6	11.4	13.1	17.0	7.3	15		
*Quartz Mountain	811	5320	4/1	15.4	6.0 <sup>b</sup>	6.2	12.9	4.6	23		
<u>SILVER LAKE BASIN</u>											
Silver Creek	942	4900	3/31	16.0	6.2	0.0	6.9	1.0	13		
<u>HARNEY BASIN</u>											
Fish Creek	952	7900	3/24	68.5	22.4	22.1	43.2	25.8	14		
Silvies	951	6900	3/24	36.7	12.5	10.0	26.5	14.3	16		
Snow Mountain	965	6300	3/23	36.0	12.3	16.2	21.5	15.2	10		
Izee Summit	964	5293	3/31	18.1	6.2	8.7	13.8	7.7	18		
Idlewild Camp	961A	5200	4/1 <sup>c</sup>	7.0	2.6 <sup>a</sup>	6.8	10.5	4.0	23		
Starr Ridge	247B	5156	3/31	10.1	3.4	5.4	10.5	4.7	18		
Lake Creek	136	5120	3/29	21.5	7.5	14.1	15.9	10.4	16		
Rock Spring	134	5100	4/1 <sup>c</sup>	3.9	1.4 <sup>a</sup>	5.3	9.1	5.0	18		
Stinking Water	135	4800	4/1	0.0	0.0	0.0	9.2	1.2	13		
<u>ALVORD LAKE BASIN</u>											
*Disaster Peak	Nev.6	6500	Report Delayed			10.1	36.2	15.8	5		
<u>McDERMITT CREEK</u>											
Disaster Peak	Nev.6	6500	Report Delayed			10.1	36.2	15.8	5		

\*Not located directly on this drainage area.

(COPCO) - Water content determined by melting a measured sample (The California Oregon Power Co.'s Station).

<sup>a</sup>Telegraphic.<sup>b</sup>Partly estimated.<sup>c</sup>Date estimated.<sup>d</sup>Survey Questioned.



OREGON SNOW SURVEYS - DELAYED DATA

DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	SNOW COVER MEASUREMENTS			Past Record			Years Water Content (In.) of 1953 1952 Avg. Record
			Date of Survey	Snow Depth (In.)	Water Content (In.)	1954			

M A R C H 15, 1954

WILLAMETTE VALLEY STREAMS

## SANTIAM RIVERS

Hogg Pass	351	4755	3-13	110.6	46.4	--	--	--	--
Santiam Junction	552	3990	3-13	61.1	24.8	--	--	--	--
Marion Forks	553	2730	3-13	45.2	16.8	--	--	--	--
Whitewater Bridge	554	2175	3-13	15.7	5.7	--	--	--	--
Detroit (new town)	555	1500+	3-13	0.0	0.0	--	--	--	--
Detroit Dam	556	1580	3-13	0.0	0.0	--	--	--	--
Mill City	557	826	3-13	0.0	0.0	--	--	--	--

Snow Line: About 1800 feet

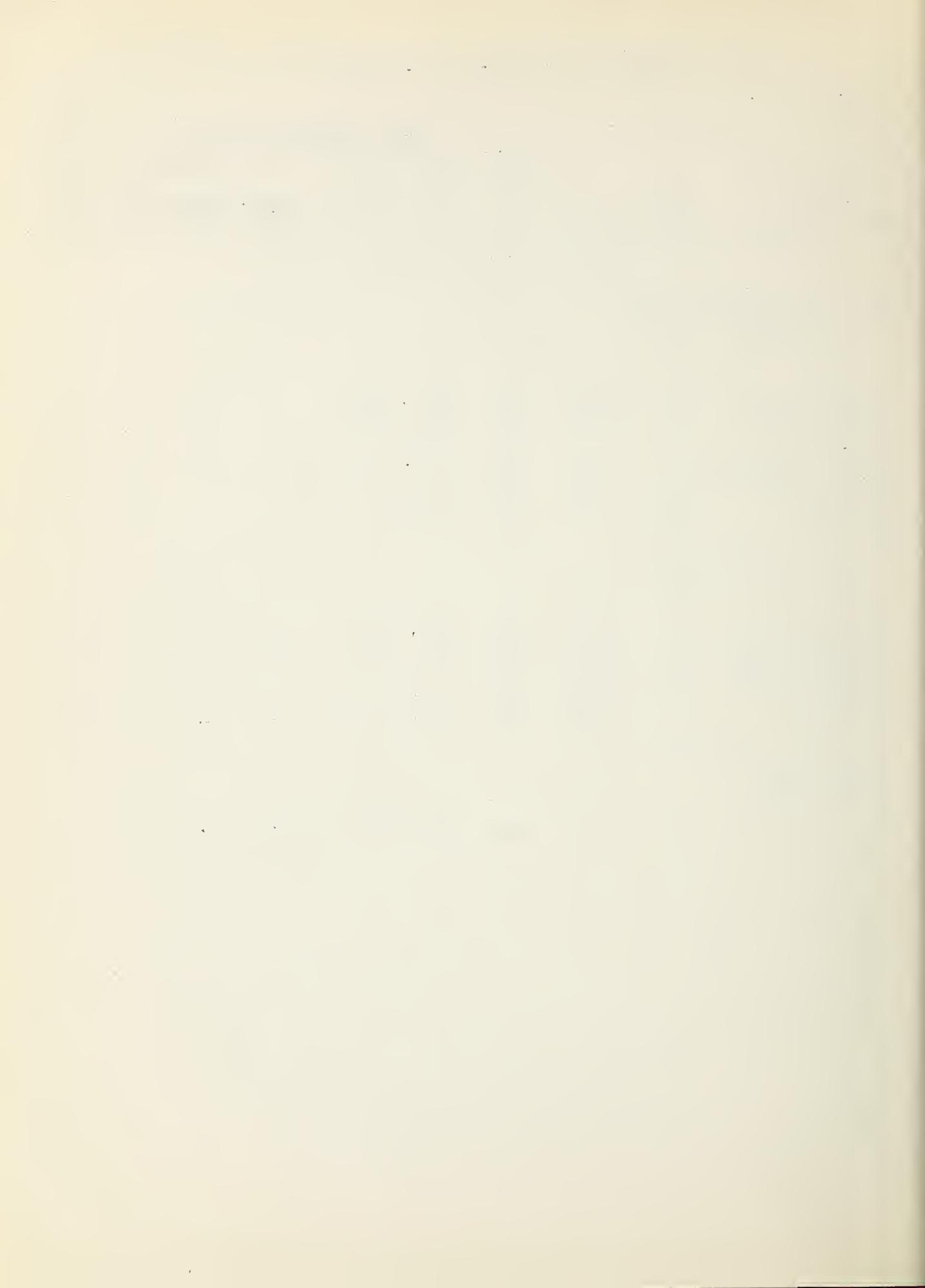
## MIDDLE FORK WILLAMETTE RIVER

Cascade Summit	321	4880	3-14	82.6	35.4	--	--	--	--
Salt Creek Falls	523	4000	3-14	42.2	17.2	--	--	--	--
Railroad Overpass	524	2750	3-14	T	T	--	--	--	--
McCredie Spring	525	2120	3-14	0.0	0.0	--	--	--	--
Oakridge	526	1310	3-14	0.0	0.0	--	--	--	--
Meridian Dam	527	750	3-14	0.0	0.0	--	--	--	--

Snow Line: About 2900 feet

KLAMATH RIVER

Lake of the Woods	835	4960	3-15	38.1	13.3	15.5	22.3	18.9	2
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OREGON PRECIPITATION<sup>a</sup>

DRAINAGE DIVISIONS	FALL		WINTER	
	Sept.-Oct.-Nov. 1953 Average	Departure <sup>b</sup>	Dec.-Jan.-Feb.-Mar. 1953-'54 Average	Departure <sup>b</sup>
Southeastern	1.50	-1.15	3.85	-0.80
Blue Mountains	3.15	-1.76	6.81	-1.57
Wallowa Mountains	3.24	-1.58	5.81	-1.10
Lower Columbia	3.58	-1.79	10.88	+2.33
Upper Deschutes	3.49	-0.45	7.93	+1.63
Willamette Valley	15.11	-1.93	33.26	+4.97
Southwestern	9.34	+1.71	15.94	+2.29
South-Central	3.51	-0.39	6.93	+0.82

Southeastern - Owyhee and lower Malheur drainages.

Blue Mountains - Upper valleys of the Umatilla, John Day and Malheur, and the Powder, Burnt and Silvies drainages.

Wallowa Mountains - Imnaha, Wallowa and Catherine drainages.

Lower Columbia - Lower valleys of the Walla Walla, Umatilla, John Day and Deschutes, and the Hood and Sandy drainages.

Upper Deschutes - Upper Deschutes and Crooked drainages.

Willamette Valley - All Willamette drainages.

Southwestern - Umpqua, Rogue and Williamson drainages.

South-Central - Sprague, Lost and Interior Basin drainages.

a - Preliminary analysis furnished by U. S. Weather Bureau.

b - Departure from 10-year (1942-51) drainage division average.

Note - Precipitation shown in inches.



The following organizations cooperate in the Oregon snow survey work:

STATE

Idaho Cooperative Snow Surveys  
Nevada Cooperative Snow Surveys  
Oregon Agricultural Experiment Station  
Oregon State Engineer and corps of State Watermasters  
Oregon State Highway Engineers  
Soil Conservation Districts of Oregon

FEDERAL

Department of Agriculture  
Cooperative Extension Service  
Forest Service  
Soil Conservation Service  
Department of Commerce  
Weather Bureau  
Department of the Interior  
Bonneville Power Administration  
Bureau of Reclamation  
Fish and Wildlife Service  
Geological Survey  
Indian Service  
National Park Service  
Department of National Defense  
Army Engineer Corps

PUBLIC UTILITIES

California-Pacific Utilities Company  
Pacific Power and Light Company  
Portland General Electric Company  
The California Oregon Power Company

MUNICIPALITIES

City of Baker  
City of La Grande  
City of The Dalles  
City of Walla Walla

IRRIGATION DISTRICTS

Associated Ditch Companies  
Central Oregon Irrigation District  
Deschutes County Municipal Improvement District  
East Fork Irrigation District  
Grants Pass Irrigation District  
Jordan Valley Irrigation District  
Lakeview Water Users, Incorporated  
Medford Irrigation District  
Ochoco Irrigation District  
Rogue River Irrigation District  
Talent Irrigation District  
Vale-Oregon Irrigation District  
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

Amalgamated Sugar Company  
The Crag Rats, Hood River, Oregon





Federal - State - Private  
COOPERATIVE SNOW SURVEYS

—  
Furnishes the basic data  
necessary for forecasting  
water supply for irrigation,  
domestic and municipal water  
supply, hydro-electric power  
generation, navigation,  
mining and industry

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“WATER IS THE WEST'S GREATEST RESOURCE”